









1. *Corvus cristatus*, Blue Jay. 2. *Fringilla Tristis*, Yellow-Bird or Goldfinch.

3. *Oriolus Baltimoreus*, Baltimore Bird.

AMERICAN ORNITHOLOGY;
OR,
THE NATURAL HISTORY
OF THE
BIRDS OF THE UNITED STATES:

ILLUSTRATED WITH PLATES

Engraved and Colored from Original Drawings taken from Nature.

BY ALEXANDER WILSON.

VOL. I.

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PREFACE.

THE whole use of a Preface seems to be, either to elucidate the nature and origin of the work, or to invoke the clemency of the Reader. Such observations as have been thought necessary for the former, will be found in the Introduction; extremely solicitous to obtain the latter, I beg leave to relate the following anecdote.

In one of my late visits to a friend's in the country, I found their youngest son, a fine boy of eight or nine years of age, who usually resides in town for his education, just returning from a ramble thro the neighbouring woods and fields, where he had collected a large and very handsome bunch of wild flowers, of a great many different colors; and presenting them to his mother, said, with much animation in his countenance, "Look my dear 'ma, what beautiful
" flowers I have found growing on our place! Why all the woods
" are full of them! red, orange, blue, and 'most every color. O I
" can gather you a whole parcel of them, much handsomer than
" these, all growing in our own woods! Shall I 'ma? Shall I go
" and bring you more?" The good woman received the bunch of flowers with a smile of affectionate complacency; and after ad-

miring for some time the beautiful simplicity of nature, gave her willing consent; and the little fellow went off, on the wings of ecstasy, to execute his delightful commission.

The similitude of this little boy's enthusiasm to my own, struck me; and the reader will need no explanations of mine to make the application. Should my country receive with the same gracious indulgence the specimens which I here humbly present her; should she express a desire for me *to go and bring her more*, the highest wishes of my ambition will be gratified; for, in the language of my little friend, *our whole woods are full of them!* and I can collect hundreds more, *much handsomer than these*.

ALEXANDER WILSON.

Philadelphia, *September 1st*, 1808.

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INTRODUCTION.

IN the commencement of a work of such magnitude, and so novel in this country, some account will necessarily be expected of the motives of the author, and of the nature and intended execution of the work. As to the former of these, it is respectfully submitted, that, amusement blended with instruction, the correction of numerous errors which have been introduced into this part of the natural history of our country, and a wish to draw the attention of my fellow-citizens, occasionally, from the discordant jarrings of politics, to a contemplation of the grandeur, harmony, and wonderful variety of Nature, exhibited in this beautiful portion of the animal creation, are my principal, and almost only, motives, in the present undertaking. I will not deny that there may also be other incitements. Biassed, almost from infancy, by a fondness for birds, and little less than an enthusiast in my researches after them, I feel happy to communicate my observations to others, probably from the mere principle of self-gratification, that source of so many even of our most virtuous actions; but I candidly declare, that *lucrative* views have nothing to do in the business. In all my wild-wood rambles *these* never were sufficient either to allure me to a single excursion, to discourage me from one, or to engage my pen or pencil in the present publication. My hopes on this head are humble enough; I ask only support equal to my merits, and to the laudability of my intentions. I expect no more; I am not altogether certain even of this. But leaving the issue of these matters to futurity, I shall, in the meantime, comfort myself with the good old adage, "Happy are they who expect *nothing*, for they shall not be disappointed."

As to the nature of the work, it is intended to comprehend a description, and representation of every species of our native

birds, from the shores of St. Laurence, to the mouths of the Mississippi, and from the Atlantic ocean to the interior of Louisiana: these will be engraved in a style superior to any thing of the kind hitherto published; and colored from nature with the most scrupulous adherence to the true tints of the original.

The bare account of scientific names, color of bills, claws, feathers, &c. would form but a dry detail; neither in a publication of the present kind, where every species is faithfully figured and colored, is a long and minute description of the form, and feathers, absolutely necessary.....This would, in the opinion of some, be like introducing a gentleman to company, with "Ladies and gentlemen, "Mr. ——. He has on a blue coat....white pantaloons....hussar boots," &c. &c. while a single glance of the eye, over the person himself, told us all this before the orator had time to open his mouth; so infinitely more rapidly do ideas reach us through the medium of the eye, than by that of the ear. But as time may prey on the best of colors, what is necessary in this respect will by no means be omitted, that the figures and descriptions may mutually corroborate each other. It is also my design to enter more largely than usual into the manners and disposition of each respective species; to become, as it were, their faithful biographer, and to delineate their various peculiarities, in character, song, building, economy, &c. as far as my own observations have extended, or the kindness of others may furnish me with materials.

The ORNITHOLOGY of the United States exhibits a rich display of the most splendid colors, from the green, silky, gold-bespangled down of the minute Humming Bird, scarce three inches in extent, to the black coppery wings of the gloomy Condor, of sixteen feet, who sometimes visits our northern regions....a numerous and powerful band of songsters, that for sweetness, variety, and melody, are surpassed by no country on earth....an ever-changing scene of migration, from torrid to temperate and from northern to southern regions, in quest of suitable seasons, food and climate; and such

an amazing diversity in habit, economy, form, disposition and faculties, so uniformly hereditary in each species, and so completely adequate to their peculiar wants and convenience, as to overwhelm us with astonishment at the power, wisdom and beneficence of the Creator!

In proportion as we become acquainted with these particulars, our visits to, and residence in the country, become more and more agreeable. Formerly, on such occasions, we found ourselves in solitude, or, with respect to the feathered tribes, as it were in a strange country, where the manners, language and faces of all were either totally overlooked, or utterly unknown to us: now, we find ourselves among interesting and well-known neighbours and acquaintances; and, in the notes of every songster, recognize with satisfaction the voice of an old friend and companion. A study thus tending to multiply our enjoyments at so cheap a rate, and to lead us, by such pleasing gradations, to the contemplation and worship of the *Great First Cause*, the Father and Preserver of all, can neither be idle nor useless, but is worthy of rational beings, and doubtless agreeable to the Deity.

In order to attain a more perfect knowledge of Birds, naturalists have divided them into Classes, Orders, Genera, Species, and Varieties; but in doing this, scarcely two have agreed on the same mode of arrangement, and this has indeed proved a source of great perplexity to the student. Some have increased the number of orders to an unnecessary extent, multiplied the genera, and, out of mere varieties, produced what they supposed to be entire new species. Others, sensible of the impropriety of this, and wishing to simplify the science, as much as possible, have reduced the orders and genera to a few, and have thus thrown birds, whose food, habits and other characteristical features are widely different, into one and the same tribe, and thereby confounded our perception of that beautiful gradation of affinity and resemblance, which Nature herself seems to have been studious of preserving throughout the

whole. One principal cause of the great diversity of classifications, appears to be owing to the neglect, or want of opportunity, in these writers, of observing the manners of the living birds, in their unconfined state, and in their native countries. As well might philosophers attempt to class mankind into their respective *religious* denominations, by a mere examination of their physiognomy, as naturalists to form a correct arrangement of animals, without a knowledge of these necessary particulars.

It is only by personal intimacy that we can truly ascertain the character of either, more particularly that of the feathered race; noting their particular haunts, modes of constructing their nests, manner of flight, seasons of migration, favourite food, and numberless other minutiae, which can only be obtained by frequent excursions in the woods and fields, along lakes, shores and rivers, and require a degree of patience and perseverance which nothing but an enthusiastic fondness for the pursuit can inspire.

Of the numerous systems which have been adopted by different writers, that published by Dr. Latham, in his "Index Ornithologicus," and "General Synopsis of Birds," seems the least subject to the objections above-mentioned; and, as in particularizing the order, genus, &c. to which each bird belongs, this system, with some necessary exceptions, has been *generally* followed in the present work, it is judged proper to introduce it here, for the information, and occasional consultation, of the reader.

TABLE

OF THE ORDERS AND GENERA OF BIRDS, ACCORDING TO LATHAM.

<i>Ind. Orn.</i>	<i>Syn. of Birds.</i>	<i>Ind. Orn.</i>	<i>Syn. of Birds.</i>
AVIUM ORDINES. ORDERS OF BIRDS.		V. <i>Gallinæ</i>	Gallinaceous
Div. I.	Div. I.	VI. <i>Struthiones</i>	Struthious
I. <i>Accipitres</i>	Rapacious	Div. II.	Div. II.
II. <i>Picæ</i>	Pics	VII. <i>Grallæ</i>	Waders
III. <i>Passeres</i>	Passerine	VIII. <i>Pinnatipedes</i>	Pinnated feet
IV. <i>Columbæ</i>	Columbine	IX. <i>Palmipedes</i>	Web-footed

INTRODUCTION.

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<i>Ind. Orn.</i>	<i>Syn. of Birds.</i>	<i>Ind. Orn.</i>	<i>Syn. of Birds.</i>
AVIUM GENERA. GENERA OF BIRDS.			
DIV. I.	DIV. I.		
AVES TERRESTRES.	LAND BIRDS.		
ORDO I.	ORDER I.		
ACCIPITRES.	RAPACIOUS.		
1 <i>Vultur</i>	Vulture	35 <i>Loxia</i>	Grosbeak
2 <i>Falco</i>	Falcon	36 <i>Emberiza</i>	Bunting
3 <i>Strix</i>	Owl	37 <i>Tanagra</i>	Tanager
		38 <i>Fringilla</i>	Finch
		39 <i>Phytotoma</i>	
		40 <i>Muscicapa</i>	Flycatcher
		41 <i>Alauda</i>	Lark
		42 <i>Motacilla</i>	Wagtail
		43 <i>Sylvia</i>	Warbler
		44 <i>Pipra</i>	Manakin
		45 <i>Parus</i>	Titmouse
		46 <i>Hirundo</i>	Swallow
		47 <i>Caprimulgus</i>	Goatsucker
ORDO II.	ORDER II.	ORDO IV.	ORDER IV.
PICÆ.	PIES.	COLUMBÆ.	COLUMBINE.
4 <i>Lanius</i>	Shrike	48 <i>Columba</i>	Pigeon
5 <i>Psittacus</i>	Parrot		
6 <i>Ramphastos</i>	Toucan	ORDO V.	ORDER V.
7 <i>Momotus</i>	Motmot	GALLINÆ.	GALLINACEOUS.
8 <i>Scythrops</i>		49 <i>Pavo</i>	Peacock
9 <i>Buceros</i>	Hornbill	50 <i>Meleagris</i>	Turkey
10 <i>Buphaga</i>	Beef-eater	51 <i>Penelope</i>	
11 <i>Crotophaga</i>	Ani	52 <i>Numida</i>	Pintado
12 <i>Calleas</i>	Wattle Bird	53 <i>Crax</i>	Curasso
13 <i>Corvus</i>	Crow	54 <i>Phasianus</i>	Pheasant
14 <i>Coracias</i>	Roller	55 <i>Tinamus</i>	Tinamon
15 <i>Oriolus</i>	Oriole	56 <i>Tetrao</i>	Grouse
16 <i>Gracula</i>	Grackle	57 <i>Perdix</i>	Partridge
17 <i>Paradisæa</i>	Paradise Bird	58 <i>Psophia</i>	Trumpeter
18 <i>Trogon</i>	Curucui	59 <i>Otis</i>	Bustard
19 <i>Bucco</i>	Barbet		
20 <i>Cuculus</i>	Cuckoo	ORDO VI.	ORDER VI.
21 <i>Yunx</i>	Wryneck	STRUTHIONES.	STRUTHIOUS.
22 <i>Picus</i>	Woodpecker	60 <i>Didus</i>	Dodo
23 <i>Galbula</i>	Jacamar	61 <i>Struthio</i>	African Ostrich
24 <i>Alcedo</i>	Kingsfisher	62 <i>Casuarus</i>	Cassowary
25 <i>Sitta</i>	Nuthatch	63 <i>Rhea</i>	American Ostrich
26 <i>Todus</i>	Tody		
27 <i>Merops</i>	Bee-eater	DIV. II.	DIV. II.
28 <i>Upupa</i>	Hoopoe	AVES AQUATICÆ.	WATER BIRDS.
29 <i>Certhia</i>	Creepers	ORDO VII.	ORDER VII.
30 <i>Trochilus</i>	Humming Bird	GRALLÆ.	WADERS.
ORDO III.	ORDER III.		
PASSERES.	PASSERINE.	64 <i>Platalea</i>	Spoonbill
31 <i>Sturnus</i>	Starling	65 <i>Palamedea</i>	Screamer
32 <i>Turdus</i>	Thrush	66 <i>Mycteria</i>	Jabiru
33 <i>Ampelis</i>	Chatterer		
34 <i>Colius</i>	Coly		

<i>Ind. Orn.</i>	<i>Syn. of Birds.</i>	<i>Ind. Orn.</i>	<i>Syn. of Birds.</i>
67 <i>Cancroma</i>	Boatbill	ORDO IX.	ORDER IX.
68 <i>Scopus</i>	Umbre	PALMIPEDES.	WEB-FOOTED.
69 <i>Ardea</i>	Heron	* <i>Pedibus longioribus</i>	* With long legs.
70 <i>Tantalus</i>	Ibis	85 <i>Recurvirostra</i>	Avocet
71 <i>Numenius</i>	Curlew	86 <i>Corrira</i>	Courier
72 <i>Scolopax</i>	Snipe	87 <i>Phaenicopterus</i>	Flamingo
73 <i>Tringa</i>	Sandpiper	†† <i>Pedibus brevioribus</i>	†† With short legs.
74 <i>Charadrius</i>	Plover	88 <i>Diomedea</i>	Albatross
75 <i>Cursorius</i>		89 <i>Alca</i>	Auk
76 <i>Hæmatopus</i>	Oyster-catcher	90 <i>Uria</i>	Guillemot
77 <i>Glareola</i>	Pratincole	91 <i>Colymbus</i>	Diver
78 <i>Rallus</i>	Rail	92 <i>Rynchops</i>	Skimmer
79 <i>Parra</i>	Jacana	93 <i>Sterna</i>	Tern
80 <i>Gallinula</i>	Gallinule	94 <i>Larus</i>	Gull
81 <i>Vaginalis</i>	Sheath-bill	95 <i>Procellaria</i>	Petrel
ORDO VIII.	ORDER VIII.	96 <i>Mergus</i>	Merganser
PINNATIPEDES.	With PINNATED-FEET.	97 <i>Anas</i>	Duck
82 <i>Phalaropus</i>	Phalarope	98 <i>Aptenodytes</i>	Penguin
83 <i>Fulica</i>	Coot	99 <i>Pelicanus</i>	Pelican
84 <i>Podiceps</i>	Grebe	100 <i>Phaeton</i>	Tropic Bird
		101 <i>Plotus</i>	Darter

It may probably be expected, that in a publication of this kind, we should commence with the order ACCIPITRES, and proceed, regularly, through the different Orders and Genera, according to the particular system adopted. This, however desirable, is in the present case altogether impracticable; unless, indeed, we possessed living specimens, or drawings, of every particular species to be described; an acquisition which no private individual, or public Museum in the world, can, as yet, boast of. This work is not intended to be a mere compilation from books, with figures taken from stuffed and dried birds, which would be but a sorry compliment to the science; but a transcript from living Nature, embracing the whole Ornithology of the United States; and as it is highly probable that numerous species, at present entirely unknown, would come into our possession long after that part of the work appropriated for the particular genera to which they belonged had been finished, and thereby interrupt, in spite of every exertion, the regularity of the above arrangement, or oblige us to omit them alto-

gether: considering these circumstances, and that during the number of years which the completion of the present work will necessarily occupy, the best opportunities will be afforded, and every endeavour used, to procure drawings of the whole, a different mode has been adopted, as being more agreeably diversified, equally illustrative of the science, and perfectly practicable; which the other is not. The Birds will, therefore, appear without regard to generical arrangement; but the order, genus, &c. of each will be particularly noted; and a complete Index added to the whole, in which every species will be arranged in systematic order, with reference to the volume, page, and plate, where each figure and description may be instantly found.

From the great expense of engravings executed by artists of established reputation, many of those who have published works of this kind, have had recourse to their own ingenuity in etching their plates; but, however honorable this might have been to their industry, it has been injurious to the effect intended to be produced by the figures; since the *point*, alone, is not sufficient to produce a finished engraving; and many years of application are necessary to enable a person, whatever may be his talents or diligence, to handle the graver with the facility and effect of the pencil; while the time, thus consumed, might be more advantageously employed in finishing drawings, and collecting facts for the descriptive part, which is the proper province of the Ornithologist. Every person who is acquainted with the extreme accuracy of eminent engravers, must likewise be sensible of the advantage of having the imperfections of the pencil corrected by the excellence of the graver. Every improvement of this kind the author has studiously availed himself of; and has frequently furnished the artist with the living or newly-killed subject itself to assist his ideas.

In coloring the impressions, the same scrupulous attention has been paid to imitate the true tints of the original. The greatest number of the descriptions, particularly those of the nests, eggs,

and plumage, have been written in the woods, with the subjects in view, leaving as little as possible to the lapse of recollection: as to what relates to the manners, habits, &c. of the birds, the particulars on these heads are the result of personal observation, from memoranda taken on the spot; if they differ, as they will in many points, from former accounts, this at least can be said in their behalf, that a single fact has not been advanced which the writer was not himself witness to, or received from those on whose judgment and veracity he believed reliance could be placed. When his own stock of observations has been exhausted, and not till then, he has had recourse to what others have said on the same subject, and all the most respectable performances of a similar nature have been consulted, to which access could be obtained; not neglecting the labours of his predecessors in this particular path, Messrs. Catesby and Edwards, whose memories he truly respects. But as a sacred regard to truth requires that the errors or inadvertencies of these authors, as well as of others, should be noticed, and corrected, let it not be imputed to unworthy motives, but to its true cause, a zeal for the promotion of that science, in which these gentlemen so much delighted, and for which they have done so much.

From the writers of our own country the author has derived but little advantage. The first considerable list of our birds was published in 1787, by Mr. Jefferson, in his celebrated "Notes on Virginia," and contains the names of 109 species, with the designations of Linnæus and Catesby, and references to Buffon. The next, and by far the most complete that has yet appeared, was published in 1791, by Mr. William Bartram, in his "Travels through North and South Carolina," &c. in which 215 different species are enumerated, and concise descriptions and characteristics of each, added in Latin and English. Dr. Barton, in his "Fragments of the Natural History of Pennsylvania," has favoured us with a number of remarks on this subject; and Dr. Belknap, in his "History of New Hampshire," as well as Dr. Williams, in that of Vermont,

have each enumerated a few of our birds. But these, from the nature of the publications in which they have been introduced, can be considered only as catalogues of names, without the detail of specific particulars, or the figured and colored representations of the birds themselves. This task, the hardest of all, has been reserved for one of far inferior abilities, but not of less zeal. With the example of many solitary individuals, in other countries, who have succeeded in such an enterprise, he has cheerfully engaged in the undertaking, trusting for encouragement solely to the fidelity with which it will be conducted.

AMERICAN ORNITHOLOGY.

BLUE JAY.

CORVUS CRISTATUS.

[Plate I.—Fig. 1.]

LINN. *Syst.* I, p. 157, 8.—*Garrulus canadensis cæruleus*, BRISS. II, p. 54, 2, t. 4, fig. 2.—*Pica glandaria cristata*, KLEIN, p. 61, 3.—*Le Geay bleu du Canada*, BUFF. III, p. 120. *Pl. Enl.* 529.—*Blue Jay*, CATESB. *Car.* I, 15.—EDW. 239.—*Arct. Zool.* II, No. 138.—LATH. *Syn.* I, p. 386, 20.—BARTRAM, p. 290.—PEALE'S *Museum*, No. 1290.

THIS elegant bird, which, as far as I can learn, is peculiar to North America, is distinguished as a kind of beau among the feathered tenants of our woods, by the brilliancy of his dress; and, like most other coxcombs, makes himself still more conspicuous by his loquacity, and the oddness of his tones and gestures. The Jay measures eleven inches in length; the head is ornamented with a crest of light blue or purple feathers, which he can elevate or depress at pleasure; a narrow line of black runs along the frontlet, rising on each side higher than the eye, but not passing *over* it, as Catesby has represented, and as Pennant and many others have described it; back and upper part of the neck a fine light purple, in which the blue predominates; a collar of black, proceeding from the hind head, passes with a graceful curve down each side of the neck, to the upper part of the breast, where it forms a crescent; chin, cheeks, throat and belly white, the three former slightly tinged with blue; greater wing-coverts a rich blue; exterior sides of the primaries light blue, those of the secondaries a deep purple, except the three feathers next the body, which are of a splendid light blue; all these, except the primaries, are beautifully barred with cres-

cents of black, and tipt with white; the interior sides of the wing feathers are dusky black; tail long and cuneiform, composed of twelve feathers of a glossy light blue, marked at half inches with transverse curves of black, each feather being tipt with white except the two middle ones, which deepen into a dark purple at the extremities. Breast and sides under the wings a dirty white, faintly stained with purple; inside of the mouth, the tongue, bill, legs and claws, black; iris of the eye hazel.

The Blue Jay is an almost universal inhabitant of the woods, frequenting the thickest settlements, as well as the deepest recesses of the forest, where his squalling voice often alarms the deer, to the disappointment and mortification of the hunter; one of whom informed me, that he made it a point, in summer, to kill every Jay he could meet with. In the charming season of spring, when every thicket pours forth harmony, the part performed by the Jay always catches the ear. He appears to be among his fellow musicians what the trumpeter is in a band, some of his notes having no distant resemblance to the tones of that instrument. These he has the faculty of changing through a great variety of modulations, according to the particular humour he happens to be in. When disposed for ridicule, there is scarce a bird whose peculiarities of song he cannot tune his notes to. When engaged in the blandishments of love they resemble the soft chatterings of a duck, and while he nestles among the thick branches of the cedar, are scarce heard at a few paces distance; but no sooner does he discover your approach, than he sets up a sudden and vehement outcry, flying off, and screaming with all his might, as if he called the whole feathered tribes of the neighbourhood to witness some outrageous usage he had received. When he hops undisturbed among the high branches of the oak and hickory, they become soft and musical; and his calls of the female a stranger would readily mistake for the repeated creakings of an ungreased wheelbarrow. All these he accompanies with various nods, jerks, and other gesticulations, for which

the whole tribe of Jays are so remarkable, that, with some other peculiarities, they might have very well justified the great Swedish naturalist in forming them into a separate genus by themselves.

The Blue Jay builds a large nest, frequently in the cedar, sometimes on an apple-tree, lines it with dry fibrous roots, and lays five eggs of a dull olive, spotted with brown. The male is particularly careful of not being heard near the place, making his visits as silently and secretly as possible. His favorite food is chesnuts, acorns, and Indian corn. He occasionally feeds on bugs and caterpillars, and sometimes pays a plundering visit to the orchard, cherry-rows and potatoe patch; and has been known in times of scarcity, to venture into the barn, through openings between the weatherboards. In these cases he is extremely active and silent, and if surprised in the fact makes his escape with precipitation, but without noise, as if conscious of his criminality.

Of all birds he is the most bitter enemy to the Owl. No sooner has he discovered the retreat of one of these, than he summons the whole feathered fraternity to his assistance, who surround the glimmering *solitaire*, and attack him from all sides, raising such a shout as may be heard, in a still day, more than half a mile off. When in my hunting excursions I have passed near this scene of tumult, I have imagined to myself that I heard the insulting party venting their respective charges with all the virulency of a Billingsgate mob; the owl, meanwhile, returning every compliment with a broad goggling stare. The war becomes louder and louder, and the owl at length forced to betake himself to flight, is followed by the whole train of his persecutors, until driven beyond the boundaries of their jurisdiction.

But the Blue Jay himself is not guiltless of similar depredations with the owl, and becomes, in his turn, the very tyrant he detested, when he sneaks through the woods, as he frequently does, and among the thickets and hedge-rows, plundering every nest he can find of its eggs, tearing up the callow young by piecemeal, and

spreading alarm and sorrow around him. The cries of the distressed parents soon bring together a number of interested spectators (for birds in such circumstances seem truly to sympathize with each other), and he is sometimes attacked with such spirit as to be under the necessity of making a speedy retreat.

He will sometimes assault small birds, with the intention of killing and devouring them; an instance of which I myself once witnessed over a piece of woods near the borders of Schuylkill; where I saw him engaged for more than five minutes pursuing what I took to be a species of *Motacilla*, wheeling, darting and doubling in the air, and at last, to my great satisfaction, got disappointed, by the escape of his intended prey. In times of great extremity, when his hoard or magazine is frozen up, buried in snow, or perhaps exhausted, he becomes very voracious, and will make a meal of whatever carrion or other animal substance comes in the way; and has been found regaling himself on the bowels of a Robin in less than five minutes after it was shot.

There are, however, individual exceptions to this general character for plunder and outrage, a proneness for which is probably often occasioned by the wants and irritations of necessity. A Blue Jay, which I have kept for some time, and with whom I am on terms of familiarity, is in reality a very notable example of mildness of disposition and sociability of manners. An accident in the woods first put me in possession of this bird, while in full plumage, and in high health and spirits; I carried him home with me, and put him into a cage already occupied by a Gold-winged Woodpecker, where he was saluted with such rudeness, and received such a drubbing from the lord of the manor, for entering his premises, that, to save his life, I was obliged to take him out again. I then put him into another cage, where the only tenant was a female Orchard Oriole. She also put on airs of alarm, as if she considered herself endangered and insulted by the intrusion; the Jay meanwhile sat mute and motionless on the bottom of the cage,

either dubious of his own situation, or willing to allow time for the fears of his neighbour to subside. Accordingly in a few minutes, after displaying various threatening gestures (like some of those Indians we read of in their first interviews with the whites), she began to make her approaches, but with great circumspection, and readiness for retreat. Seeing, however, the Jay begin to pick up some crumbs of broken chesnuts, in a humble and peaceable way, she also descended, and began to do the same; but at the slightest motion of her new guest, wheeled round and put herself on the defensive. All this ceremonious jealousy vanished before evening; and they now roost together, feed, and play together, in perfect harmony and good humor. When the Jay goes to drink, his mess-mate very impudently jumps into the saucer to wash herself, throwing the water in showers over her companion, who bears it all patiently; venturing now and then to take a sip between every splash, without betraying the smallest token of irritation. On the contrary, he seems to take pleasure in his little fellow-prisoner, allowing her to pick (which she does very gently) about his whiskers, and to clean his claws from the minute fragments of chesnuts which happen to adhere to them. This attachment on the one part, and mild condescension on the other, may, perhaps, be partly the effect of mutual misfortunes, which are found not only to knit mankind, but many species of inferior animals, more closely together; and shews that the disposition of the Blue Jay may be humanized, and rendered susceptible of affectionate impressions, even for those birds which in a state of nature he would have no hesitation in making a meal of.

He is not only bold and vociferous, but possesses a considerable talent for mimicry, and seems to enjoy great satisfaction in mocking and teasing other birds, particularly the little hawk (*F. Sparverius*), imitating his cry wherever he sees him, and squealing out as if caught; this soon brings a number of his own tribe around him, who all join in the frolic, darting about the hawk and

feigning the cries of a bird sorely wounded and already under the clutches of its devourer; while others lie concealed in bushes, ready to second their associates in the attack. But this ludicrous farce often terminates tragically. The hawk singling out one of the most insolent and provoking, sweeps upon him in an unguarded moment, and offers him up a sacrifice to his hunger and resentment. In an instant the tune is changed; all their buffoonery vanishes, and loud and incessant screams proclaim their disaster.

Wherever the Jay has had the advantage of education from man, he has not only shewn himself an apt scholar, but his suavity of manners seems equalled only by his art and contrivances; tho it must be confessed, that his itch for thieving keeps pace with all his other acquirements. Dr. Mease, on the authority of colonel Postell, of South Carolina, informs me, that a Blue Jay which was brought up in the family of the latter gentleman, had all the tricks and loquacity of a parrot; pilfered every thing he could conveniently carry off, and hid them in holes and crevices; answered to his name with great sociability, when called on; could articulate a number of words pretty distinctly; and when he heard any uncommon noise or loud talking, seemed impatient to contribute his share to the general festivity (as he probably thought it) by a display of all the oratorical powers he was possessed of.

Mr. Bartram relates an instance of the Jay's sagacity worthy of remark. "Having caught a Jay in the winter season," says he, "I turned him loose in the green-house, and fed him with corn, (zea, maize,) the heart of which they are very fond of. This grain being ripe and hard, the bird at first found a difficulty in breaking it, as it would start from his bill when he struck it. After looking about, and as if considering for a moment, he picked up his grain, carried and placed it close up in a corner on the shelf, between the wall and a plant box, where being confined on three sides he soon effected his purpose, and continued afterwards to make use of this same practical expedient. The Jay," continues

this judicious observer, “is one of the most useful agents in the
“economy of nature, for disseminating forest trees, and other ru-
“ciferous and hard-seeded vegetables on which they feed. Their
“chief employment during the autumnal season is foraging to sup-
“ply their winter stores. In performing this necessary duty they
“drop abundance of seed in their flight over fields, hedges, and
“by fences, where they alight to deposit them in the post holes,
“&c. It is remarkable what numbers of young trees rise up in
“fields and pastures after a wet winter and spring. These birds
“alone are capable in a few years time, to replant all the cleared
“lands.”*

The Blue Jays seldom associate in any considerable numbers, except in the months of September and October, when they hover about in scattered parties of from 40 to 50, visiting the oaks, in search of their favorite acorns. At this season they are less shy than usual; and keep chattering to each other in a variety of strange and querulous notes. I have counted 53, but never more, at one time; and these generally following each other in straggling irregularity from one range of woods to another. Yet we are told by the learned Dr. Latham, and his statement has been copied into many respectable European publications, that the Blue Jays of North America “often unite into flocks of 20,000 at least! which
“alighting on a field of 10 or 12 acres, soon lay waste the whole.”† If this were really so, these birds would justly deserve the character he gives them, of being the most destructive species in America. But I will venture the assertion, that the tribe *Oriolus Phœniceus*, or Red-winged Blackbirds, in the environs of the river Delaware alone, devour and destroy more Indian corn than the whole Blue Jays of North America. As to their assembling in such immense multitudes, it may be sufficient to observe, that a flock of Blue Jays of 20,000, would be as extraordinary an appearance in Ame-

* Letter of Mr. William Bartram to the author.

† Synopsis of Birds, vol. i, p. 387. See also Encyclopedia Britannica, art. Corvus.

rica, as the same number of Magpies or Cuckoos would be in Britain.

It has been frequently said, that numbers of birds are common to the United States and Europe; at present, however, I am not certain of many. Comparing the best descriptions and delineations of the European ones with those of our native birds, said to be of the same species, either the former are very erroneous, or the difference of plumage and habits in the latter justify us in considering a great proportion of them to be really distinct species. Be this however as it may, the Blue Jay appears to belong exclusively to North America. I cannot find it mentioned by any writer or traveller among the birds of Guiana, Brazil, or any other part of South America. It is equally unknown in Africa. In Europe and even in the eastern parts of Asia it is never seen in its wild state. To ascertain the exact limits of its native regions would be difficult. These, it is highly probable, will be found to be bounded by the extremities of the temperate zone. Dr. Latham has indeed asserted, that the Blue Jay of America is not found farther north than the town of Albany.* This, however, is a mistake. They are common in the eastern states, and are mentioned by Dr. Belknap in his enumeration of the birds of New Hampshire.† They are also natives of Newfoundland. I myself have seen them in Upper Canada. Blue Jays and Yellow Birds were found by Mr. M'Kenzie, when on his journey across the continent, at the head waters of the Unjigah, or Peace river, in N. lat. 54°. W. long. 121°. on the west side of the great range of stony mountains.‡ Steller, who in 1741 accompanied captain Behring in his expedition for the discovery of the north-west coast of America, and who wrote the journal of the voyage, relates, that he himself went on shore near cape St. Elias, in N. lat. 58° 28'. W. long. 141° 46', according to his estimation, where he observed several species of birds

* Synopsis, vol. i, p. 387.

† Hist. N. Hamp. vol iii, p. 163.

‡ Voyage from Montreal, &c. p. 216, quarto, Lond. 1801.

not known in Siberia; and one, in particular, described by Catesby under the name of the Blue Jay.* Mr. William Bartram informs me, that they are numerous in the peninsula of Florida, and that he also found them at Natchez, on the Mississippi. Captains Lewis and Clarke, and their intrepid companions, in their memorable expedition across the continent of North America to the Pacific ocean, continued to see Blue Jays for 600 miles up the Missouri.† From these accounts it follows, that this species occupies, generally or partially, an extent of country stretching upwards of 70 degrees from east to west, and more than 30 degrees from north to south; tho, from local circumstances, there may be intermediate tracts in this immense range which they seldom visit.

* See Steller's Journal apud Pallas.

† This fact I had from captain Lewis.

YELLOW-BIRD, OR GOLDFINCH.

FRINGILLA TRISTIS.

[Plate I.—Fig. 2.]

LINN. *Syst.* I, p. 320.—*Carduelis Americana*, BRISS. III, p. 6, 3.—*Le Chardonnerat jaune*, BUFF. IV, p. 112. *Pl. enl.* 202, f. 2.—*American Goldfinch*, *Arct. Zool.* II, No. 242.—EDW. 274.—LATH. *Syn.* III, p. 288, 57. *Id. Sup.* p. 166.—BARTRAM, p. 290.—PEALE'S *Museum*, No. 6344.

THIS bird is four inches and a half in length, and eight inches in extent, of a rich lemon yellow, fading into white towards the rump and vent. The wings and tail are black, the former tipped and edged with white, the interior webs of the latter are also white; the fore part of the head is black, the bill and legs of a reddish cinnamon color. This is the summer dress of the male; but in the month of September the yellow gradually changes to a brown olive, and the male and female are then nearly alike. They build a very neat and delicately formed little nest, which they fasten to the twigs of an apple tree, or to the strong branching stalks of hemp, covering it on the outside with pieces of lichen which they find on the trees and fences; these they glue together with their saliva, and afterwards line the inside with the softest downy substances they can procure. The female lays five eggs, of a dull white, thickly marked at the greater end; and they generally raise two broods in a season. The males do not arrive at their perfect plumage until the succeeding spring; wanting, during that time, the black on the head; and the white on the wings being of a cream color. In the month of April they begin to change their winter dress, and before the middle of May appear in brilliant yellow: the whole plumage towards its roots is of a dusky bluish black.

The song of the Yellow-bird resembles that of the Goldfinch of Britain; but is in general so weak as to appear to proceed from a considerable distance, when perhaps the bird is perched on the tree over your head. I have, however, heard some sing in cages with great energy and animation. On their first arrival in Pennsylvania, in February, and until early in April, they associate in flocks, frequently assembling in great numbers on the same tree to bask and dress themselves in the morning sun, singing in concert for half an hour together; the confused mingling of their notes forming a kind of harmony not at all unpleasant.

About the last of November, and sometimes sooner, they *generally* leave Pennsylvania, and proceed to the south; some, however, are seen even in the midst of the severest winters. Their flight is not direct, but in alternate risings and sinkings, twittering as they fly, at each successive impulse of the wings. During the latter part of summer they are almost constant visitants in our gardens, in search of seeds, which they dislodge from the husk with great address, while hanging, frequently head downwards, in the manner of the Titmouse. From these circumstances, as well as from their color, they are very generally known, and pass by various names expressive of their food, color, &c. such as Thistle-bird, Lettuce-bird, Sallad-bird, Yellow-bird, &c. &c. The gardeners who supply the city of Philadelphia with vegetables often take them in trap-cages, and expose them for sale in the market. They are easily familiarized to confinement, and feed with seeming indifference a few hours after being taken.

The great resemblance which the Yellow-bird bears to the Canary, has made many persons attempt to pair individuals of the two species together. An ingenious French gentleman who resides in Pottsgrove, Pennsylvania, assured me, that he had tried the male Yellow-bird with the female Canary, and the female Yellow-bird with the male Canary, but without effect, tho he kept them for several years together, and supplied them with proper materials for

building. Mr. Hassey, of New York, however, who keeps a great number of native as well as foreign birds, informed me, that a Yellow-bird paired with a Canary in his possession, and laid eggs, but did not hatch, which he attributed to the lateness of the season.

These birds, as has been before observed, were seen by Mr. M'Kenzie, in his route across the continent of North America, as far north as lat. 54°; they are numerous in all the Atlantic states north of the Carolinas; abound in Mexico, and are also found in great numbers in the savannahs of Guiana.

The seeds of the lettuce, thistle, hemp, &c. are their favorite food, and it is pleasant to observe a few of them at work in a calm day, detaching the thistle down in search of the seeds, making it fly in clouds around them. The figure on the plate represents this bird of its natural size.

The American Goldfinch has been figured and described by Mr. Catesby,* who says that the back part of the head is a dirty green, &c. This description must have been taken while the bird was changing its plumage. At the approach of fall, not only the rich yellow fades into a brown olive; but the spot of black on the crown and forehead, becomes also of the same olive tint. Mr. Edwards has also erred in saying that the young male bird has the spot of black on the forehead; this it does not receive until the succeeding spring. The figure in Edwards is considerably too large; and that by Catesby has the wings and tail much longer than in nature, and the body too slender; very different from the true form of the living bird. Mr. Pennant also tells us, that the legs of this species are *black*; they are, however, of a bright cinnamon color; but the worthy naturalist, no doubt, described them as he found them in the dried and stuffed skin, shrivelled up and blackened with decay; and thus too much of our natural history has been delineated.

* Nat. Hist. Car. vol. i, p. 43.

BALTIMORE ORIOLE.

ORIOLUS BALTIMORE.

[Pl. I.—Fig. 3.]

LINN. *Syst. I*, p. 162, 10.—*Icterus Minor*, BRISS. II, p. 109, 19, t. 12, fig. 1.—*Le Baltimore*, BUFF. III, p. 231. *Pl. Enl.* 506, fig. 1.—*Baltimore Bird*, CATESB. *Car.* 1, 48.—*Arct. Zool.* II, p. 142.—LATH. *Syn.* II, p. 432, 19.—BARTRAM, p. 290.—PEALE'S *Museum*, No. 1506.

THIS is a bird of passage, arriving in Pennsylvania from the south about the beginning of May, and departing towards the latter end of August or beginning of September. From the singularity of its colors, the construction of its nest, and its preferring the apple trees, weeping willows, walnut and tulip trees adjoining the farm house, to build on, it is generally known, and, as usual, honored with a variety of names, such as Hang-nest, Hanging-bird, Golden Robin, Fire-bird (from the bright orange seen through the green leaves resembling a flash of fire), &c. but more generally the Baltimore bird, so named, as Catesby informs us, from its colors, which are black and orange, being those of the arms or livery of lord Baltimore, formerly proprietary of Maryland.

The Baltimore Oriole is seven inches in length; bill almost straight, strong, tapering to a sharp point, black, and sometimes lead colored above, the lower mandible light blue towards the base. Head, throat, upper part of the back and wings black; lower part of the back, rump, and whole under parts a bright orange, deepening into vermilion on the breast; the black on the shoulders is also divided by a band of orange; exterior edges of the greater wing-coverts, as well as the edges of the secondaries and part of those of the primaries white; the tail feathers under the coverts orange; the two middle ones from thence to the tips are black, the

next five, on each side, black near the coverts, and orange toward the extremities, so disposed, that when the tail is expanded, and the coverts removed, the black appears in the form of a pyramid, supported on an arch of orange. Tail slightly forked, the exterior feather on each side a quarter of an inch shorter than the others: legs and feet light blue or lead color; iris of the eye hazel.

The female has the head, throat, upper part of the neck and back of a dull black, each feather being skirted with olive yellow, lower part of the back, rump, upper tail-coverts and whole lower parts, orange yellow, but much duller than that of the male; the whole wing feathers are of a deep dirty brown, except the quills, which are exteriorly edged, and the greater wing coverts and next superior row, which are broadly tipped, with a dull yellowish white; tail olive-yellow; in some specimens the two middle feathers have been found partly black, in others wholly so; the black on the throat does not descend so far as in the male, is of a lighter tinge, and more irregular; bill, legs and claws light blue.

Buffon, and Latham, have both described the male of the bastard Baltimore (*Oriolus spurius*), as the female Baltimore. Mr. Pennant has committed the same mistake; and all the ornithologists of Europe, with whose works I am acquainted, who have undertaken to figure and describe these birds, have mistaken the proper males and females, and confounded the two species together in a very confused and extraordinary manner, for which indeed we ought to pardon them, on account of their distance from the native residence of these birds, and the strange alterations of color which the latter are subject to.

This obscurity I have endeavoured to clear up in the present volume of this work, Pl. IV, by exhibiting the male and female of the *Oriolus spurius* in their different changes of dress, as well as in their perfect plumage; and by introducing representations of the eggs of both, have, I hope, put the identity of these two species beyond all future dispute or ambiguity.

Almost the whole genus of Orioles belong to America, and with a few exceptions build pensile nests. Few of them, however, equal the Baltimore in the construction of these receptacles for their young, and in giving them, in such a superior degree, convenience, warmth, and security. For these purposes he generally fixes on the high bending extremities of the branches, fastening strong strings of hemp or flax round two forked twigs, corresponding to the intended width of the nest; with the same materials, mixed with quantities of loose tow, he interweaves or fabricates a strong firm kind of cloth, not unlike the substance of a hat in its raw state, forming it into a pouch of six or seven inches in depth, lining it substantially with various soft substances, well interwoven with the outward netting, and, lastly, finishes with a layer of horse hair; the whole being shaded from the sun and rain by a natural pent-house, or canopy of leaves. As to a hole being left in the side for the young to be fed and void their excrements through, as Pennant and others relate, it is certainly an error: I have never met with any thing of the kind in the nest of the Baltimore.

Tho birds of the same species have, generally speaking, a common form of building, yet, contrary to the usually received opinion, they do not build exactly in the same manner. As much difference will be found in the style, neatness and finishing of the nests of the Baltimores, as in their voices. Some appear far superior workmen to others; and probably age may improve them in this as it does in their colors. I have a number of their nests now before me, all completed and with eggs. One of these, the neatest, is in the form of a cylinder, of five inches diameter, and seven inches in depth, rounded at bottom. The opening at top is narrowed, by a horizontal covering, to two inches and a half in diameter. The materials are flax, hemp, tow, hair and wool, woven into a complete cloth; the whole tightly sewed thro and thro with long horse hairs, several of which measure two feet in length. The bottom is composed of thick tufts of cow hair, sewed also with

strong horse hair. This nest was hung on the extremity of the horizontal branch of an apple-tree, fronting the south-east; was visible one hundred yards off, though shaded by the sun; and was the work of a very beautiful and perfect bird. The eggs are five, white, slightly tinged with flesh color, marked on the greater end with purple dots, and on the other parts with long hair-like lines, intersecting each other in a variety of directions. I am thus minute in these particulars, from a wish to point out the specific difference between the true and bastard Baltimore, which Dr. Latham and some others suspect to be only the same bird in different stages of color.

So solicitous is the Baltimore to procure proper materials for his nest, that in the season of building, the women in the country are under the necessity of narrowly watching their thread that may chance to be out bleaching, and the farmer to secure his young grafts; as the Baltimore finding the former, and the strings which tie the latter, so well adapted for his purpose, frequently carries off both; or should the one be too heavy, and the other too firmly tied, he will tug at them a considerable time before he gives up the attempt. Skeins of silk and hanks of thread have been often found, after the leaves were fallen, hanging round the Baltimore's nest; but so woven up, and entangled, as to be entirely irreclaimable. Before the introduction of Europeans no such material could have been obtained here; but with the sagacity of a good architect he has improved this circumstance to his advantage; and the strongest and best materials are uniformly found in those parts by which the whole is supported.

Their principal food consists of caterpillars, beetles and bugs, particularly one of a brilliant glossy green, fragments of which I have almost always found in their stomach, and sometimes these only.

The song of the Baltimore is a clear mellow whistle, repeated at short intervals as he gleans among the branches. There is in

it a certain wild plaintiveness and *naïveté* extremely interesting. It is not uttered with the rapidity of the ferruginous thrush (*Turdus rufus*), and some other eminent songsters; but with the pleasing tranquillity of a careless plough-boy, whistling merely for his own amusement. When alarmed by an approach to his nest, or any such circumstance, he makes a kind of rapid chirruping, very different from his usual note. This, however, is always succeeded by those mellow tones which seem so congenial to his nature.

High on yon poplar, clad in glossiest green,
The orange, black-capp'd Baltimore is seen;
The broad extended boughs still please him best,
Beneath their bending skirts he hangs his nest;
There his sweet mate, secure from every harm,
Broods o'er her spotted store and wraps them warm;
Lists to the noontide hum of busy bees,
Her partner's mellow song, the brook, the breeze;
These, day by day, the lonely hours deceive,
From dewy morn to slow descending eve.
Two weeks elaps'd, behold a helpless crew!
Claim all her care and her affection too;
On wings of love th'assiduous nurses fly,
Flowers, leaves and boughs abundant food supply;
Glad chants their guardian as abroad he goes,
And waving breezes rock them to repose.

The Baltimore inhabits North America, from Canada to Mexico, and is even found as far south as Brazil. Since the streets of our cities have been planted with that beautiful and stately tree, the Lombardy poplar, these birds are our constant visitors during the early part of summer; and amid the noise and tumult of coaches, drays, wheelbarrows, and the din of the multitude, they are heard chanting "their native wood notes wild;" sometimes too within a

few yards of an oysterman, who stands bellowing, with the lungs of a Stentor under the shade of the same tree; so much will habit reconcile even birds to the roar of the city, and to sounds and noises, that, in other circumstances, would put a whole grove of them to flight.

These birds are several years in receiving their complete plumage. Sometimes the whole tail of a male individual, in spring, is yellow, sometimes only the two middle feathers are black, and frequently the black on the back is skirted with orange, and the tail tipt with the same color. Three years, I have reason to believe, are necessary to fix the full tint of the plumage, and then the male bird appears as already described.



1. *Turdus Melodus*, Wood Thrush. 2. *Turdus Migratorius*, Redbreasted Thrush, or Robin . .

3. *Sitta Carolinensis*, White breasted black-capped Nuthatch. 4. *Sitta Varia*, Red-bellied-black-capped Nuthatch.

WOOD THRUSH.

TURDUS MELODUS.

[Plate II.—Fig. 1.]

BARTRAM, *p.* 290.—PEALE'S *Museum*, No. 5264.

THIS bird is represented on the plate of its natural size; and particular attention has been paid to render the figure a faithful likeness of the original. It measures eight inches in length, and thirteen from tip to tip of the expanded wings; the bill is an inch long, the upper mandible of a dusky brown, bent at the point, and slightly notched; the lower a flesh color towards the base; the legs are long, and, as well as the claws, of a pale flesh color, or almost transparent. The whole upper parts are of a brown fulvous color brightening into reddish on the head, and inclining to an olive on the rump and tail; chin white; throat and breast white, tinged with a light buff color, and beautifully marked with pointed spots of black or dusky, running in chains from the sides of the mouth, and intersecting each other all over the breast to the belly, which, with the vent, is of a pure white; a narrow circle of white surrounds the eye, which is large, full, the pupil black, and the iris of a dark chocolate color; the inside of the mouth is yellow. The male and female of this species, as indeed of almost the whole genus of thrushes, differ so little as scarcely to be distinguished from each other. It is called by some the Wood Robin, by others the Ground Robin, and by some of our American ornithologists *Turdus minor*, though as will hereafter appear, improperly. The present name has been adopted from Mr. William Bartram, who seems to have been the first and almost only naturalist who has taken notice of the merits of this bird.

This sweet and solitary songster inhabits the whole of North America from Hudson's bay to the peninsula of Florida. He arrives in Pennsylvania about the 20th of April, or soon after; and returns to the south about the beginning of October. The lateness or earliness of the season seems to make less difference in the times of arrival of our birds of passage than is generally imagined. Early in April the woods are often in considerable forwardness, and scarce a summer bird to be seen. On the other hand vegetation is sometimes no farther advanced on the 20th of April, at which time (*e. g.* this present year 1807) numbers of Wood Thrushes are seen flitting through the moist woody hollows; and a variety of the *Motacilla* genus chattering from almost every bush, with scarce an expanded leaf to conceal them. But at whatever time the Wood Thrush may arrive, he soon announces his presence in the woods. With the dawn of the succeeding morning, mounting to the top of some tall tree that rises from a low thick-shaded part of the woods, he pipes his few but clear and musical notes in a kind of ecstasy; the prelude, or symphony to which, strongly resembles the double-tongueing of a German flute, and sometimes the tinkling of a small bell; the whole song consists of five or six parts, the last note of each of which is in such a tone as to leave the conclusion evidently suspended; the finale is finely managed, and with such charming effect as to soothe and tranquillize the mind, and to seem sweeter and mellowed at each successive repetition. Rival songsters, of the same species, challenge each other from different parts of the wood, seeming to vie for softer tones and more exquisite responses. During the burning heat of the day, they are comparatively mute; but in the evening the same melody is renewed, and continued long after sun-set. Those who visit our woods, or ride out into the country at these hours, during the months of May and June, will be at no loss to recognize, from the above description, this pleasing musician. Even in dark, wet and gloomy weather, when scarce a single chirp is heard from any other bird, the clear notes of the

Wood Thrush thrill through the dropping woods, from morning to night; and it may truly be said that, the sadder the day the sweeter is his song.

The favorite haunts of the Wood Thrush are low, thick-shaded hollows, through which a small brook or rill meanders, overhung with alder bushes that are mantled with wild vines. Near such a scene he generally builds his nest, in a laurel or alder bush. Outwardly it is composed of withered beech leaves of the preceding year, laid at bottom in considerable quantities, no doubt to prevent damp and moisture from ascending through, being generally built in low wet situations; above these are layers of knotty stalks of withered grass, mixed with mud, and smoothly plastered, above which is laid a slight lining of fine black fibrous roots of plants. The eggs are four, sometimes five, of a uniform light blue, without any spots.

The Wood Thrush appears always singly or in pairs, and is of a shy retired unobtrusive disposition. With the modesty of true merit he charms you with his song, but is content and even solicitous to be concealed. He delights to trace the irregular windings of the brook, where by the luxuriance of foliage the sun is completely shut out, or only plays in a few interrupted beams on the glittering surface of the water. He is also fond of a particular species of lichen which grows in such situations, and which, towards the fall, I have uniformly found in their stomachs; berries, however, of various kinds, are his principal food, as well as beetles and caterpillars. The feathers on the hind head are longer than is usual with birds which have no crest; these he sometimes erects; but this particular cannot be observed but on a close examination.

Those who have paid minute attention to the singing of birds know well, that the voice, energy and expression, in the same tribe, differ as widely, as the voices of different individuals of the human species, or as one singer does from another. The powers of song in some individuals of the Wood Thrush have often surprized and

delighted me. Of these I remember one, many years ago, whose notes I could instantly recognize on entering the woods, and with whom I had been as it were acquainted from his first arrival. The top of a large white oak that overhung part of the glen, was usually the favorite pinnacle from whence he poured the sweetest melody; to which I had frequently listened till night began to gather in the woods, and the fire-flies to sparkle among the branches. But alas! in the pathetic language of the poet

‘ One morn I miss’d him on th’accustom’d hill,
Along the vale, and on his favorite tree—
Another came, nor yet beside the rill,
Nor up the glen nor in the wood was he.’

A few days afterwards, passing along the edge of the rocks, I found fragments of the wings and broken feathers of a Wood Thrush killed by the Hawk, which I contemplated with unfeigned regret, and not without a determination to retaliate on the first of these murderers I could meet with.

That I may not seem singular in my estimation of this bird, I shall subjoin an extract of a letter from a distinguished American gentleman to whom I had sent some drawings, and whose name, were I at liberty to give it, would do honour to my humble performance, and render any further observations on the subject from me unnecessary.

“ As you are curious in birds, there is one well worthy your
“ attention, to be found, or rather heard, in every part of America,
“ and yet scarcely ever to be seen. It is in all the forests from
“ spring to fall, and never but on the tops of the tallest trees, from
“ which it perpetually serenades us with some of the sweetest notes,
“ and as clear as those of the nightingale. I have followed it for
“ miles without ever but once getting a good view of it. It is of
“ the size and make of the mocking bird, lightly thrush colored

“ on the back, and a greyish white on the breast and belly. Mr.
 “ ———, my son-in-law, was in possession of one which had been
 “ shot by a neighbour, he pronounced it a *muscicapa*, and I think it
 “ much resembles the *Mouche rolle de la Martinique*, 8 Buffon, 374,
 “ Pl. enlum, 568. As it abounds in all the neighbourhood of Phi-
 “ ladelphia, you may, perhaps, by patience and perseverance (of
 “ which much will be requisite) get a sight, if not a possession of
 “ it. I have for 20 years interested the young sportsmen of my
 “ neighbourhood to shoot me one; but as yet without success.”

It may seem strange that neither Sloane,* Catesby, Edwards nor Buffon, all of whom are said to have described this bird, should say any thing of its melody; or rather, assert that it had only a single cry or scream. This I cannot account for in any other way than by supposing, what I think highly probable, that this bird has never been figured or described by any of the above authors.

Catesby has, indeed, represented a bird, which he calls *Turdus minimus*,† but it is difficult to discover, either from the figure or description what particular species is meant; or whether it be really intended for the Wood Thrush we are now describing. It resembles, he says, the English Thrush; but is less, never sings, has only a single note, and abides all the year in Carolina. It must be confessed that, except the first circumstance, there are few features of the Wood Thrush in this description. I have myself searched the woods of Carolina and Georgia, in winter, for this bird, in vain, nor do I believe that it ever winters in these states. If Mr. Catesby found his bird mute during spring and summer, it was not the Wood Thrush; otherwise he must have changed his very nature. But Mr. Edwards has also described and delineated the Little Thrush,‡ and has referred to Catesby as having drawn and engraved it before. Now this Thrush of Edwards I know to be really a different species; one not resident in Pennsylvania, but

* Hist. Jam. ii, 305.

† Catesby, Nat. Hist. Car. i, 31.

‡ Edwards, 296.

passing to the north in May, and returning the same way in October, and may be distinguished from the true Song Thrush (*Turdus Melodus*) by the spots being much broader, brown, and not descending below the breast. It is also an inch shorter, with the cheeks of a bright tawny color. Mr. William Bartram, who transmitted this bird, more than 50 years ago, to Mr. Edwards, by whom it was drawn and engraved, examined the two species in my presence; and on comparing them with the one in Edwards, was satisfied that the bird there figured and described is not the Wood Thrush (*Turdus Melodus*), but the tawny cheeked species above mentioned. This species I have never seen in Pennsylvania but in spring and fall. It is still more solitary than the former, and utters, at rare times a single cry, similar to that of a chicken which has lost its mother. This very bird I found numerous in the Myrtle swamps of Carolina in the depth of winter, and I have not a doubt of its being the same which is described by Edwards and Catesby.

As the count de Buffon has drawn his description from those above mentioned, the same observations apply equally to what he has said on the subject; and the fanciful theory which this writer had formed to account for its want of song, vanishes into empty air; viz. that the Song Thrush of Europe (*Turdus Musicus*) had, at some time after the creation, rambled round by the Northern ocean, and made its way to America; that advancing to the south it had there (of consequence) become degenerated by change of food and climate, so that its cry is now harsh and unpleasant, "as are the cries of all birds that live in wild countries inhabited by savages."*

A figure and description of this passenger Thrush will appear in an early part of the present work.

* Buffon, vol. iii, 289. The figure in Pl. Enl. 398, has little or no resemblance to the Wood Thrush, being of a deep green olive above, and spotted to the very vent, with long streaks of brown.

ROBIN.

TURDUS MIGRATORIUS.

[Plate II.—Fig. 2.]

LINN. *Syst.* I, p. 292, 6.—*Turdus Canadensis*, BRISS. II, p. 225, 9.—*La Litarne de Canada*, BUFF. III, p. 307.—*Grive du Canada*, *Pl. Enl.* 556, 1.—*Fieldfare of Carolina*, CAT. Car. I, 29.—*Red-breasted Thrush*, *Arct. Zool.* II, No. 196.—LATH. *Syn.* III, p. 26.—BARTRAM, p. 290.—PEALE'S *Museum*, No. 5278.

THIS well known bird, being familiar to almost every body, will require but a short description. It measures nine inches and a half in length; the bill is strong, an inch long, and of a full yellow, tho sometimes black, or dusky near the tip of the upper mandible; the head, back of the neck and tail is black; the back and rump an ash color; the wings are black edged with light ash; the inner tips of the two exterior tail feathers are white; three small spots of white border the eye; the throat and upper part of the breast is black, the former streaked with white; the whole of the rest of the breast, down as far as the thighs, is of a dark orange; belly and vent white, slightly waved with dusky ash; legs dark brown; claws black and strong. The colors of the female are more of the light ash, less deepened with black; and the orange on the breast is much paler, and more broadly skirted with white. The name of this bird bespeaks him a bird of passage, as are all the different species of Thrushes we have; but the one we are now describing being more unsettled, and continually roving about from one region to another, during fall and winter, seems particularly entitled to the appellation. Scarce a winter passes but innumerable thousands of them are seen in the lower parts of the whole Atlantic states, from New Hampshire to Carolina, particularly in the neighbourhood of

our towns; and from the circumstance of their leaving, during that season, the country to the north-west of the great range of the Alleghany, from Maryland northward, it would appear that they not only migrate from north to south, but from west to east, to avoid the deep snows that generally prevail on these high regions for at least four months in the year.

The Robin builds a large nest, often on an apple tree, plasters it in the inside with mud, and lines it with hay or fine grass. The female lays five eggs of a beautiful sea green. Their principal food is berries, worms and caterpillars. Of the first he prefers those of the sour gum (*Nyssa Sylvatica*). So fond are they of Gum berries, that wherever there is one of these trees covered with fruit, and flocks of Robins in the neighbourhood, the sportsman need only take his stand near it, load, take aim, and fire; one flock succeeding another with little interruption, almost the whole day; by this method prodigious slaughter has been made among them with little fatigue. When berries fail they disperse themselves over the fields, and along the fences, in search of worms and other insects. Sometimes they will disappear for a week or two, and return again in greater numbers than before; at which time the cities pour out their sportsmen by scores, and the markets are plentifully supplied with them at a cheap rate. In January, 1807, two young men in one excursion after them, shot thirty dozen. In the midst of such devastation, which continued many weeks, and by accounts extended from Massachusetts to Maryland, some humane person took advantage of a circumstance common to these birds in winter, to stop the general slaughter. The fruit called poke-berries (*Phytolacca decandra*, Linn.) is a favorite repast with the Robin, after they are mellowed by the frost. The juice of the berries is of a beautiful crimson, and they are eaten in such quantities by these birds, that their whole stomachs are strongly tinged with the same red color. A paragraph appeared in the public papers, intimating, that from the great quantities of these berries which the Robins had fed on,

they had become unwholesome, and even dangerous food; and that several persons had suffered by eating of them. The strange appearance of the bowels of the birds seemed to corroborate this account. The demand for, and use of them ceased almost instantly; and motives of self-preservation produced at once what all the pleadings of humanity could not effect.* When fat they are in considerable esteem for the table, and probably not inferior to the turdii of the ancients, which they bestowed so much pains on in feeding and fattening. The young birds are frequently and easily raised, bear the confinement of the cage, feed on bread, fruits, &c. sing well, readily learn to imitate parts of tunes, and are very pleasant and cheerful domestics. In these I have always observed that the orange on the breast is of a much deeper tint, often a dark mahogany or chesnut color, owing no doubt to their food and confinement.

The Robin is one of our earliest songsters; even in March, while snow yet dapples the fields, and flocks of them are dispersed about, some few will mount a post or stake of the fence, and make short and frequent attempts at their song. Early in April, they are only to be seen in pairs, and deliver their notes with great earnestness, from the top of some tree detached from the woods. This song has some resemblance to, and indeed is no bad imitation of the notes of the Thrush or Thrasher (*Turdus rufus*); but if deficient in point of execution, he possesses more simplicity; and makes up in zeal what he wants in talent; so that the notes of the Robin, in spring, are universally known, and as universally beloved. They are as it were the prelude to the grand general concert, that is about

* Governor Drayton in his "View of South Carolina," p. 86, observes, that "the Robins in winter devour the berries of the Bead tree (*Melia Azedarach*), in such large quantities, that after eating of them they are observed to fall down, and are readily taken. This is ascribed more to distention from abundant eating than from any deleterious qualities of the plant." The fact, however is, that they are literally choked, many of the berries being too large to be swallowed.

to burst upon us from woods, fields and thickets, whitened with blossoms, and breathing fragrance. By the usual association of ideas, we therefore listen with more pleasure to this cheerful bird than to many others possessed of far superior powers, and much greater variety. Even his nest is held more sacred among school-boys than that of some others; and while they will exult in plundering a Jay's or a Catbird's, a general sentiment of respect prevails on the discovery of a Robin's. Whether he owes not some little of this veneration to the well known and long established character of his namesake in Britain, by a like association of ideas, I will not pretend to determine. He possesses a good deal of his suavity of manners; and almost always seeks shelter for his young in summer, and subsistence for himself in the extremes of winter, near the habitations of man.

The Robin inhabits the whole of North America from Hudson's bay to Nootka sound, and as far south as Georgia, tho they rarely breed on this side the mountains farther south than Virginia. Mr. Forster says, that about the beginning of May they make their appearance in pairs at the settlements of Hudson's bay, at Severn river; and adds, a circumstance altogether unworthy of belief, *viz.* that at Moose fort they build, lay and hatch in fourteen days! but that at the former place, four degrees more north, they are said to take twenty-six days.* They are also common in Newfoundland, quitting these northern parts in October. The young during the first season are spotted with white on the breast, and at that time have a good deal of resemblance to the Fieldfare of Europe.

Mr. Hearne informs us, that the red-breasted Thrushes, are commonly called at Hudson's bay the Red-birds; by some the Black-birds, on account of their note; and by others the American Field-fares. That they make their appearance at Churchill river about the middle of May; and migrate to the south early in the fall. They

* Phil. Trans. lxii, 399.

are seldom seen there but in pairs; and are never killed for their flesh except by the Indian boys.*

Several authors have asserted, that the Red-breasted Thrush cannot brook the confinement of the cage; and never sings in that state. But, except the Mocking-bird (*Turdus Polyglottos*), I know of no native bird which is so frequently domesticated, agrees better with confinement, or sings in that state more agreeably than the Robin. They generally suffer severely in moulting time; yet often live to a considerable age. A lady who resides near Tarrytown, on the banks of the Hudson, informed me, that she raised and kept one of these birds for seventeen years; which sung as well, and looked as sprightly, at that age as ever; but was at last unfortunately destroyed by a cat. The morning is their favorite time for song. In passing, through the streets of our large cities, on Sunday, in the months of April and May, a little after day-break, the general silence which usually prevails without at that hour, will enable you to distinguish every house where one of these songsters resides, as he makes it then ring with his music.

Not only the plumage of the Robin, as of many other birds, is subject to slight periodical changes of color, but even the legs, feet and bill; the latter, in the male, being frequently found tipt and ridged for half its length with black. In the depth of winter their plumage is generally best; at which time the full grown bird, in his most perfect dress, appears as exhibited in the plate.

* Journey to the Northern ocean, p. 418, quarto, Lond. 1795.

WHITE-BREASTED, BLACK-CAPT NUTHATCH.

SITTA CAROLINENSIS.

[Plate II.—Fig. 3.]

CATESB. I, 22, *fig.* 2.—LATH. I, 650, *B.*—BRISS. III, *p.* 596, 4.—*Sitta Carolinensis*, TURTON.—*Sitta Europea*, *Grey black-capped Nuthatch*, BARTRAM, *p.* 289.—PEALE'S *Museum*, No. 2036.

THE bill of this bird is black, the upper mandible straight, the lower one rounded upwards, towards the point, and white near the base; the nostrils are covered with long curving black hairs; the tongue is of a horny substance, and ending in several sharp points; the general color above is of a light blue or lead; the tail consists of twelve feathers, the two middle ones lead color, the next three are black, tipped with white for one tenth, one fourth, and half of an inch; the two next are also black, tipped half an inch or more with white, which runs nearly an inch up their exterior edges, and both have the white at the tips touched with black; the legs are of a purple or dirty flesh color; the hind claw is much the largest; the inside of the wing at the bend is black; below this is a white spot spreading over the roots of the first five primaries; the whole length is five inches and a half, extent eleven.

Mr. Pennant considers this bird as a mere variety of the European Nuthatch; but if difference in size, color and habits be sufficient characteristics of a distinct species, this bird is certainly entitled to be considered as such. The head and back of the European species is of an uniform bluish grey; the upper parts of the head, neck, and shoulders of ours are a deep black, glossed with green; the breast and belly of the former is a dull orange, with streaks of chesnut, those parts in the latter are pure white. The European has a line of black passing thro the eye, half way down the neck; the present species has nothing of the kind; but appears

with the inner webs of the three shortest secondaries and the primaries of a jet black; the latter tipped with white, and the vent and lower parts of the thighs of a rust color; the European therefore and the present are evidently two distinct and different species.

This bird builds its nest early in April, in the hole of a tree; in a hollow rail in the fence; and sometimes in the wooden cornice under the eaves; and lays five eggs of a dull white, spotted with brown at the greater end. The male is extremely attentive to the female while sitting, supplying her regularly with sustenance, stopping frequently at the mouth of the hole, calling and offering her what he has brought, in the most endearing manner. Sometimes he seems to stop merely to enquire how she is, and to lighten the tedious moments with his soothing chatter. He seldom rambles far from the spot, and when danger appears, regardless of his own safety, he flies instantly to alarm her. When both are feeding on the trunk of the same tree, or of adjoining ones, he is perpetually calling on her; and, from the momentary pause he makes, it is plain that he feels pleased to hear her reply.

The White-breasted Nuthatch is common almost every where in the woods of North America; and may be known at a distance by the notes *quank, quank*, frequently repeated, as he moves upward and down, in spiral circles, around the body and larger branches of the tree, probing behind the thin scaly bark of the white oak, and shelling off considerable pieces of it in search after spiders, ants, insects and their larvæ. He rests and roosts with his head downwards; and appears to possess a degree of curiosity not common to many birds; frequently descending, very silently, within a few feet of the root of the tree where you happen to stand, stopping, head downward, stretching out his neck in a horizontal position, as if to reconnoitre your appearance, and after several minutes of silent observation, wheeling round, he again mounts, with fresh activity, piping his unisons as before. Strongly attached to his native forests he seldom forsakes them; and amidst the

rigors of the severest winter weather, his note is still heard in the bleak and leafless woods, and among the howling branches. Sometimes the rain, freezing as it falls, encloses every twig, and even the trunk of the tree, in a hard transparent coat or shell of ice. On these occasions I have observed his anxiety and dissatisfaction, at being with difficulty able to make his way along the smooth surface; at these times generally abandoning the trees, gleaning about the stables, around the house, mixing among the fowls, entering the barn, and examining the beams and rafters, and every place where he may pick up a subsistence.

The name Nuthatch has been bestowed on this family of birds from their supposed practice of breaking nuts by repeated hatchings, or hammerings with their bills. Soft shelled nuts, such as chesnuts, chinkopins, and hazel nuts, they may probably be able to demolish, tho I have never yet seen them so engaged; but it must be rather in search of maggots that sometimes breed there, than for the kernel. It is however said that they lay up a large store of nuts for winter; but as I have never either found any of their magazines, or seen them collecting them, I am inclined to doubt the fact. From the great numbers I have opened at all seasons of the year, I have every reason to believe that ants, small seeds, insects and their larvæ, form their chief subsistence, such matters alone being uniformly found in their stomachs. Neither can I see what necessity they could have to circumambulate the trunks of trees with such indefatigable and restless diligence, while bushels of nuts lay scattered round their roots. As to the circumstance mentioned by Dr. Plott, of the European Nuthatch "putting its bill into a crack in the bough of a tree, and making such a violent sound, as if it was rending asunder," this, if true, would be sufficient to distinguish it from the species we have been just describing, which possesses no such faculty. The female differs little from the male in color, chiefly in the black being less deep on the head and wings.

RED-BELLIED BLACK-CAPT NUTHATCH.

SITTA VARIA.

[Plate II.—Fig. 4.]

Sitta Varia, BART. p. 289.—*Sitta Canadensis*, TURTON.—*Small Nuthatch*, LATH. I, 651.

THIS bird is much smaller than the last, measuring only four inches and a half in length, and eight inches in extent. In the form of its bill, tongue, nostrils, and in the color of the back and tail-feathers it exactly agrees with the former; the secondaries are not relieved with the deep black of the other species, and the legs, feet and claws are of a dusky greenish yellow; the upper part of the head is black, bounded by a stripe of white passing round the frontlet; a line of black passes thro the eye to the shoulder; below this is another line of white; the chin is white; the other under parts a light rust color; the primaries and whole wings a dusky lead color. The breast and belly of the female is not of so deep a brown, and the top of the head less intensely black.

This species is migratory, passing from the north, where they breed, to the southern states in October, and returning in April. Its voice is sharper, and its motions much quicker than those of the other, being so rapid, restless and small, as to make it a difficult point to shoot one of them. When the two species are in the woods together, they are easily distinguished by their voices, the note of the least being nearly an octave sharper than that of its companion, and repeated more hurriedly. In other respects their notes are alike unmusical and monotonous. Approaching so near to each other in their colors and general habits, it is probable that their mode of building, &c. may be also similar.

Buffon's *Torchepot de la Canada*, Canada Nuthatch of other European writers, is either a young bird of the present species, in

its imperfect plumage, or a different sort that rarely visits the United States. If the figure (Pl. Enl. 623) be correctly colored, it must be the latter, as the tail and head appear of the same bluish grey or lead color as the back. The young birds of this species, it may be observed, have also the crown of a lead color during the first season; but the tail feathers are marked nearly as those of the old ones. Want of precision in the figures and descriptions of these authors make it difficult to determine; but I think it very probable, that *Sitta Jamaicensis* minor, Briss., the Least Loggerhead of Brown, *Sitta Jamaicensis* var. t. st. Linn., and *Sitta Canadensis* of Linn. Gmel. and Briss. are names that have been originally applied to different individuals of the species we are now describing.

This bird is particularly fond of the seeds of pine trees. You may traverse many thousand acres of oak, hickory and chesnut woods, during winter, without meeting with a single individual; but no sooner do you enter among the pines than, if the air be still, you have only to listen for a few moments, and their note will direct you where to find them. They usually feed in pairs, climbing about in all directions, generally accompanied by the former species, as well as by the Titmouse, *Parus atricapillus*, and the crested Titmouse, *Parus bicolor*, and not unfrequently by the small spotted Woodpecker, *Picus pubescens*; the whole company proceeding regularly from tree to tree thro the woods like a corps of pioneers; while in a calm day the rattling of their bills, and the rapid motions of their bodies, thrown like so many tumblers and rope dancers into numberless positions, together with the peculiar chatter of each, are altogether very amusing; conveying the idea of hungry diligence, bustle and activity. Both these little birds from the great quantity of destructive insects and larvæ they destroy, both under the bark and among the tender buds of our fruit and forest trees, are entitled to and truly deserving of our esteem and protection.



1. *Picus Auratus*, Gold-winged Woodpecker. 2. *Emberiza Americana*, Black-throated Bunting.

3 *Motacilla Sialis*, Blue Bird.

GOLD-WINGED WOODPECKER.

PICUS AURATUS.

[Pl. III.—Fig. 1.]

Le Pic aux ailes dorées, DE BUFFON VII, 39. *Pl. enl.* 693.—*Picus Auratus*, LINN. *Syst.* 174.—*Cuculus alis deauratis*, KLEIN, *p.* 30.—CATESBY I, 18.—LATHAM II, 597.—BARTRAM, *p.* 289.—PEALE'S *Museum*, No. 1938.

THIS elegant bird is well known to our farmers and junior sportsmen, who take every opportunity of destroying him; the former for the supposed trespasses he commits on their Indian corn, or the trifle he will bring in market, and the latter for the mere pleasure of destruction, and perhaps for the flavour of his flesh, which is in general esteem. In the state of Pennsylvania he can scarcely be called a bird of passage, as even in severe winters they may be found within a few miles of the city of Philadelphia; and I have known them exposed for sale in market every week during the months of November, December and January, and that too in more than commonly rigorous weather. They, no doubt, however, partially migrate, even here; being much more numerous in spring and fall than in winter. Early in the month of April they begin to prepare their nest, which is built in the hollow body or branch of a tree, sometimes, tho not always, at a considerable height from the ground; for I have frequently known them fix on the trunk of an old apple tree, at not more than six feet from the root. The sagacity of this bird in discovering under a sound bark, a hollow limb or trunk of a tree, and its perseverance in perforating it for the purpose of incubation, are truly surprising; the male and female alternately relieving and encouraging each other by mutual caresses, renewing their labours for several days till the object is attained,

and the place rendered sufficiently capacious, convenient and secure. At this employment they are so extremely intent that they may be heard till a very late hour in the evening, thumping like carpenters. I have seen an instance where they had dug first five inches straight forwards, and then downwards more than twice that distance, thro a solid black oak. They carry in no materials for their nest, the soft chips and dust of the wood serving for this purpose. The female lays six white eggs, almost transparent. The young early leave the nest, and climbing to the higher branches are there fed by their parents.

The food of this bird varies with the season. As the common cherries, bird cherries, and berries of the sour gum successively ripen, he regales plentifully on them, particularly on the latter; but the chief food of this species, or that which is most usually found in his stomach, is wood lice, and the young and larvæ of ants, of which he is so immoderately fond, that I have frequently found his stomach distended with a mass of these and these only, as large nearly as a plumb. For the procuring of these insects nature has remarkably fitted him. The bills of Woodpeckers, in general, are straight, grooved or channelled, wedge-shaped, and compressed to a thin edge at the end, that they may the easier penetrate the hardest wood; that of the Golden-winged Woodpecker is long, slightly bent, ridged only on the top, and tapering almost to a point, yet still retaining a little of the wedge-form there. Both, however, are admirably adapted for the peculiar manner each has of procuring its food. The former, like a powerful wedge, to penetrate the dead and decaying branches, after worms and insects; the latter like a long and sharp pick-ax, to dig up the hillocks of pismires, that inhabit old stumps in prodigious multitudes. These beneficial services would entitle him to some regard from the husbandman, were he not accused, and perhaps not without just cause, of being too partial to the Indian corn when in that state which is usually called *roasting-ears*. His visits are indeed rather frequent

about this time; and the farmer, suspecting what is going on, steals thro among the rows with his gun, bent on vengeance, and forgetful of the benevolent sentiment of the poet;—that

.....Just as wide of *justice* he must fall
Who thinks all made for One, not one for all.

But farmers in general are not much versed in poetry, and pretty well acquainted with the value of corn, from the hard labour requisite in raising it.

In rambling thro the woods one day, I happened to shoot one of these birds, and wounded him slightly in the wing. Finding him in full feather, and seemingly but little hurt, I took him home, and put him into a large cage, made of willows, intending to keep him in my own room, that we might become better acquainted. As soon as he found himself inclosed on all sides, he lost no time in idle fluttering, but throwing himself against the bars of the cage, began instantly to demolish the willows, battering them with great vehemence, and uttering a loud piteous kind of cackling, similar to that of a hen when she is alarmed, and takes to wing. Poor baron Trenck never laboured with more eager diligence at the walls of his prison than this son of the forest in his exertions for liberty; and he exercised his powerful bill with such force, digging into the sticks, seizing and shaking them so from side to side, that he soon opened for himself a passage; and tho I repeatedly repaired the breach, and barricadoed every opening in the best manner I could, yet on my return into the room I always found him at large, climbing up the chairs, or running about the floor, where from the dexterity of his motions, moving backwards, forwards, and sideways with the same facility, it became difficult to get hold of him again. Having placed him in a strong wire cage, he seemed to give up all hopes of making his escape, and soon became very tame; fed on young ears of Indian corn; refused apples, but ate the berries of

the sour gum greedily, small winter grapes, and several other kinds of berries; exercised himself frequently in climbing, or rather hopping perpendicularly along the sides of the cage; and as evening drew on, fixed himself in a high hanging or perpendicular position, and slept with his head in his wing. As soon as dawn appeared, even before it was light enough to perceive him distinctly across the room, he descended to the bottom of the cage, and began his attack on the ears of Indian corn, rapping so loud as to be heard from every room in the house. After this he would sometimes resume his former position, and take another nap. He was beginning to become very amusing, and even sociable, when, after a lapse of several weeks, he became drooping, and died, as I conceived from the effects of his wound.

Some European naturalists, (and among the rest Linnæus himself, in his tenth edition of *Systema Naturæ*,) have classed this bird with the genus *Cuculus*, or Cuckoo, informing their readers that it possesses many of the habits of the Cuckoo; that it is almost always on the ground; is never seen to climb trees like the other Woodpeckers, and that its bill is altogether unlike theirs; every one of which assertions I must say is incorrect, and could have only proceeded from an entire unacquaintance with the manners of the bird. Except in the article of the bill, and that, as has been before observed, is still a little wedge-formed at the point, it differs in no one characteristic from the rest of its genus. Its nostrils are covered with tufts of recumbent hairs or small feathers; its tongue is round, worm-shaped, flattened towards the tip, pointed and furnished with minute barbs; it is also long, missile, and can be instantaneously protruded to an uncommon distance. The *os hyöides*, or internal parts of the tongue, like those of its tribe, is a substance for strength and elasticity, resembling whalebone, divided into two branches, each the thickness of a knitting kneedle, that pass, one on each side of the neck, to the hind head, where they unite, and run up along the scull in a groove covered with a thin membrane

or sheath; descend into the upper mandible by the right side of the right nostril, and reach to within half an inch of the point of the bill, to which they are attached by another extremely elastic membrane, that yields when the tongue is thrown out, and contracts as it is retracted. In the other Woodpeckers we behold the same apparatus, differing a little in different species. In some these cartilaginous substances reach only to the top of the cranium; in others they reach to the nostril; and in one species they are wound round the bone of the right eye, which projects considerably more than the left for its accommodation.

The tongue of the Gold-winged Woodpecker, like the others, is also supplied with a viscid fluid, secreted by two glands that lie under the ear on each side, and are at least five times larger in this species than in any other of its size; with this the tongue is continually moistened, so that every small insect it touches instantly adheres to it. The tail, in its strength and pointedness, as well as the feet and claws, prove that the bird was designed for climbing; and in fact I have scarcely ever seen it on a tree five minutes at a time without climbing; hopping not only upwards and downwards but spirally; pursuing and playing with its fellow, in this manner round the body of the tree. I have also seen them, a hundred times alight on the trunk of the tree; tho they more frequently alight on the branches; but that they climb, construct like nests, lay the same number and the like colored eggs, and have the manners and habits of the Woodpeckers, is notorious to every American naturalist; while neither in the form of their body, nor any other part, except in the bill being somewhat bent, and the toes placed two before and two behind, have they the smallest resemblance whatever to the Cuckoo.

It may not be improper, however, to observe, that there is another species of Woodpecker, called also Gold-winged,* which

* *Picus cafer*, TURTON'S LINN.

inhabits the country near the Cape of Good Hope, and resembles the present, it is said, almost exactly in the color and form of its bill, and in the tint and markings of its plumage, with this difference, that the mustaches are red instead of black, and the lower side of the wings, as well as their shafts, are also red where the other is golden yellow. It is also considerably less. With respect to the habits of this new species we have no particular account; but there is little doubt that they will be found to correspond with the one we are now describing.

The abject and degraded character which the count de Buffon, with equal eloquence and absurdity, has drawn of the whole tribe of Woodpeckers, belongs not to the elegant and sprightly bird now before us. How far it is applicable to any of them will be examined hereafter. He is not "constrained to drag out an insipid existence in boring the bark and hard fibres of trees to extract his prey," for he frequently finds in the loose mouldering ruins of an old stump (the capital of a nation of pismires) more than is sufficient for the wants of a whole week. *He* cannot be said to "lead a mean and gloomy life, without an intermission of labour," who usually feasts by the first peep of dawn, and spends the early and sweetest hours of morning on the highest peaks of the tallest trees, calling on his mate or companions; or pursuing and gamboling with them round the larger limbs and body of the tree for hours together; for such are really his habits. Can it be said that "necessity never grants an interval of sound repose" to that bird, who, while other tribes are exposed to all the peltings of the midnight storm, lodges dry and secure in a snug chamber of his own constructing; or that "the narrow circumference of a tree circumscribes *his* dull round of life," who, as seasons and inclination inspire, roams from the frigid to the torrid zone, feasting on the abundance of various regions? Or is it a proof that "his appetite is never softened by delicacy of taste," because he so often varies his bill of fare, occasionally preferring to animal food the rich milki-

ness of young Indian corn, and the wholesome and nourishing berries of the Wild Cherry, Sour Gum, and Red Cedar? Let the reader turn to the faithful representation of him given in the plate, and say whether his looks be “sad and melancholy?” It is truly ridiculous and astonishing that such absurdities should escape the lips or pen of one so able to do justice to the respective merits of every species; but Buffon had too often a favorite theory to prop up that led him insensibly astray; and so, forsooth, the whole family of Woodpeckers must look sad, sour, and be miserable, to satisfy the caprice of a whimsical philosopher who takes it into his head that they are, and ought to be so.

But the count is not the only European who has misrepresented and traduced this beautiful bird. One has given him brown legs,* another a yellow neck;† a third has declared him a Cuckoo;‡ and in an English translation of Linnæus’ System of Nature, lately published, he is characterized as follows: “Body striated with black and grey; cheeks red; chin black; never climbs on trees;”§ which is just as correct as if in describing the human species we should say—skin striped with black and green; cheeks blue; chin orange; never walks on foot, &c. The pages of natural history should resemble a faithful mirror, in which mankind may recognize the true images of the living originals; instead of which we find this department of them, too often, like the hazy and rough medium of wretched window glass, thro whose crooked protuberances every thing appears so strangely distorted, that one scarcely knows their most intimate neighbours and acquaintances.

The Gold-winged Woodpecker has the back and wings above of a dark umber, transversely marked with equi-distant streaks of black; upper part of the head an iron grey; cheeks and parts surrounding the eyes a fine cinnamon color; from the lower mandible

* See Encyc. Brit. Art. PICUS.

† LATHAM.

‡ KLEIN.

§ “*P. griseo nigroque transversim striatus*”——“*truncos arborum non scandit.*” Ind. Orn. v. I, p. 242,

a strip of black, an inch in length, passes down each side of the throat, and a lunated spot, of a vivid blood red, covers the hind head, its two points reaching within half an inch of each eye; the sides of the neck, below this, incline to a bluish grey; throat and chin a very light cinnamon or fawn color; the breast is ornamented with a broad crescent of deep black; the belly and vent white, tinged with yellow, and scattered with innumerable round spots of black, every feather having a distinct central spot, those on the thighs and vent being heart-shaped and largest; the lower or inner side of the wing and tail, shafts of all the larger feathers, and indeed of almost every feather, are of a beautiful golden yellow; that on the shafts of the primaries being very distinguishable even when the wings are shut; the rump is white, and remarkably prominent; the tail-coverts white, and curiously serrated with black; upper side of the tail and the tip below black, edged with light loose filaments of a cream color, the two exterior feathers serrated with whitish; shafts black towards the tips, the two middle ones nearly wholly so; bill an inch and a half long, of a dusky horn color, somewhat bent, ridged only on the top, tapering, but not to a point, that being a little wedge-formed; legs and feet light blue; iris of the eye hazel; length twelve inches, extent twenty. The female differs from the male chiefly in the greater obscurity of the fine colors, and in wanting the black mustaches on each side of the throat. This description, as well as the drawing, was taken from a very beautiful and perfect specimen.

Tho this species, generally speaking, is migratory, yet they often remain with us in Pennsylvania during the whole winter. They also inhabit the continent of North America from Hudson's Bay to Georgia; and have been found by voyagers on the northwest coast of America. They arrive at Hudson's Bay in April, and leave it in September. Mr. Hearne however informs us, that "the Gold-winged Woodpecker is almost the only species of Woodpecker that winters near Hudson's Bay." The natives there call

it *Ou-thee-quan-nor-ow*, from the golden color of the shafts and lower side of the wings. It has numerous provincial appellations in the different states of the Union, such as "High-hole," from the situation of its nest, and "Hittock," "Yucker," "Piut," "Flicker," by which last it is usually known in Pennsylvania. These names have probably originated from a fancied resemblance of its notes to the sound of the words; for one of its most common cries consists of two notes or syllables, frequently repeated, which by the help of the hearer's imagination may easily be made to resemble any or all of them.

BLACK-THROATED BUNTING.

EMBERIZA AMERICANA.

[Plate III.—Fig. 2.]

Calandra pratensis, the May Bird, BARTRAM, p. 291.—PEALE'S *Museum*, No. 5952.—
Arct. Zool. 228.—*Emberiza Americana*, *Ind. Orn.* p. 44.

OF this bird I have but little to say. They arrive in Pennsylvania from the south about the middle of May; abound in the neighbourhood of Philadelphia, and seem to prefer level fields covered with rye-grass, timothy, or clover, where they build their nest, fixing it in the ground, and forming it of fine dried grass. The female lays five white eggs, sprinkled with specks and lines of black. Like most part of their genus, they are no ways celebrated for musical powers. Their whole song consists of five notes, or, more properly, of two notes; the first repeated twice and slowly, the second thrice, and rapidly, resembling *chip, chip, che che ché*. Of this ditty, such as it is, they are by no means parsimonious, for from their first arrival for the space of two or three months, every level field of grain or grass is perpetually serenaded with *chip, chip, che che ché*. In their shape and manners they very much resemble the Yellow-Hammer of Britain (*E. citrinella*); like them they are fond of mounting to the top of some half-grown tree, and there chirruping for half an hour at a time. In travelling thro different parts of New York and Pennsylvania in spring and summer, wherever I came to level fields of deep grass, I have constantly heard these birds around me. In August they become mute, and soon after, that is, towards the beginning of September, leave us altogether.

The Black-throated Bunting is six inches and a half in length; the upper part of the head is of a dusky greenish yellow; neck dark

ash; breast, inside shoulders of the wing, line over the eye and at the lower angle of the bill yellow; chin, and space between the bill and eye white; throat covered with a broad, oblong, somewhat heart-shaped patch of black, bordered on each side with white; back, rump and tail ferruginous, the first streaked with black; wings deep dusky, edged with a light clay color; lesser coverts and whole shoulder of the wing bright bay; belly and vent dull white; bill light blue, dusky above, strong and powerful for breaking seeds; legs and feet brown; iris of the eye hazel. The female differs from the male in having little or no black on the breast, nor streak of yellow over the eye; beneath the eye she has a dusky streak, running in the direction of the jaw. In all those I opened the stomach was filled with various seeds, gravel, eggs of insects, and sometimes a slimy kind of earth or clay.

This bird has been figured by Latham, Pennant, and several others. The former speaks of a bird which he thinks is either the same, or nearly resembling it, that resides in summer in the country about Hudson's Bay, and is often seen associating in flights with the geese;* this habit, however, makes me suspect that it must be a different species; for while with us here the Black-throated Bunting is never gregarious; but is almost always seen singly, or in pairs, or, at most, the individuals of one family together.

* LATH. Syn. Suppl. p. 158.

BLUE-BIRD.

SYLVIA SIALIS.

[Plate III.—Fig. 3.]

Le Rouge gorge bleu, DE BUFFON V, 212. *Pl. enl.* 390.—*Blue Warbler*, LATH. II, 446.—CATESB. I, 47.—*Motacilla sialis*, LINN. *Syst.* 336.—BARTRAM, *p.* 291.—PEALE'S *Museum*, No. 7188.

THE pleasing manners and sociable disposition of this little bird entitle him to particular notice. As one of the first messengers of spring, bringing the charming tidings to our very doors, he bears his own recommendation always along with him, and meets with a hearty welcome from every body.

Tho generally accounted a bird of passage; yet so early as the middle of February, if the weather be open, he usually makes his appearance about his old haunts, the barn, orchard and fence-posts. Storms and deep snows sometimes succeeding, he disappears for a time; but about the middle of March is again seen, accompanied by his mate, visiting the box in the garden, or the hole in the old apple-tree, the cradle of some generations of his ancestors. "When he first begins his amours," says a curious and correct observer, "it is pleasing to behold his courtship, his solicitude to please and to secure the favor of his beloved female. He uses the tenderest expressions, sits close by her, caresses and sings to her his most endearing warblings. When seated together, if he espies an insect delicious to her taste, he takes it up, flies with it to her, spreads his wing over her and puts it in her mouth."* If a rival makes his appearance, (for they are ardent in their loves,)

* Letter from Mr. William Bartram to the author.

he quits her in a moment, attacks and pursues the intruder as he shifts from place to place; in tones that bespeak the jealousy of his affection, conducts him with many reproofs beyond the extremities of his territory, and returns to warble out his transports of triumph beside his beloved mate. The preliminaries being thus settled, and the spot fixed on, they begin to clean out the old nest, and the rubbish of the former year, and to prepare for the reception of their future offspring. Soon after this another sociable little pilgrim (*Motacilla domestica*, House Wren), also arrives from the south, and finding such a snug birth pre-occupied, shews his spite, by watching a convenient opportunity, and in the absence of the owner popping in and pulling out sticks; but takes special care to make off as fast as possible.

The female lays five, and sometimes six, eggs, of a pale blue color; and raises two, and sometimes three brood in a season; the male taking the youngest under his particular care while the female is again sitting. Their principal food are insects, particularly large beetles, and others of the coleopterous kinds that lurk among old dead and decaying trees. Spiders are also a favorite repast with them. In Fall they occasionally regale themselves on the berries of the sour gum; and as winter approaches, on those of the red cedar, and on the fruit of a rough hairy vine that runs up and cleaves fast to the trunks of trees. Ripe persimmons is another of their favorite dishes; and many other fruits and seeds which I have found in their stomachs at that season, which, being no botanist, I am unable to particularize. They are frequently pestered with a species of tape-worm, some of which I have taken from their intestines of an extraordinary size, and in some cases in great numbers. Most other birds are also plagued with these vermin; but the Blue-bird seems more subject to them than any I know, except the Woodcock. An account of the different species of vermin, many of which I doubt not are non-descripts, that infest the plumage and intestines of our birds, would of itself form an inte-

resting publication; but as this belongs more properly to the entomologist, I shall only in the course of this work, take notice of some of the most remarkable; and occasionally represent them in the same plate with those birds on which they are usually found.

The usual spring and summer song of the Blue-bird is a soft, agreeable and oft-repeated warble, uttered with open quivering wings, and is extremely pleasing. In his motions and general character he has great resemblance to the Robin Red-breast of Britain; and had he the brown olive of that bird, instead of his own blue, could scarcely be distinguished from him. Like him he is known to almost every child; and shews as much confidence in man by associating with him in summer, as the other by his familiarity in winter. He is also of a mild and peaceful disposition, seldom fighting or quarrelling with other birds. His society is courted by the inhabitants of the country, and few farmers neglect to provide for him in some suitable place, a snug little summer-house, ready fitted and rent-free. For this he more than sufficiently repays them by the cheerfulness of his song, and the multitude of injurious insects which he daily destroys. Towards Fall, that is in the month of October, his song changes to a single plaintive note, as he passes over the yellow, many-colored woods; and its melancholy air recalls to our minds the approaching decay of the face of nature. Even after the trees are stript of their leaves, he still lingers over his native fields, as if loth to leave them. About the middle or end of November, few or none of them are seen; but with every return of mild and open weather we hear his plaintive note amidst the fields, or in the air, seeming to deplore the devastations of winter. Indeed he appears scarcely ever totally to forsake us; but to follow fair weather thro all its journeyings till the return of spring.

Such are the mild and pleasing manners of the Blue-bird, and so universally is he esteemed, that I have often regretted that no pastoral muse has yet arisen in this western woody world, to do

justice to his name, and endear him to us still more by the tenderness of verse, as has been done to his representative in Britain, the Robin Red-breast. A small acknowledgment of this kind I have to offer, which the reader I hope will excuse as a tribute to rural innocence.

When winter's cold tempests and snows are no more,
Green meadows and brown furrow'd fields re-appearing,
The fishermen hauling their shad to the shore,
And cloud-cleaving geese to the Lakes are a-steering;
When first the lone butterfly flits on the wing;
When red glow the maples, so fresh and so pleasing,
O then comes the Blue-bird, the HERALD OF SPRING!
And hails with his warblings the charms of the season.

Then loud piping frogs make the marshes to ring;
Then warm glows the sunshine, and fine is the weather;
The blue woodland flowers just beginning to spring,
And spicewood and sassafras budding together;
O then to your gardens ye housewives repair!
Your walks border up; sow and plant at your leisure;
The Blue-bird will chant from his box such an air,
That all your hard toils will seem truly a pleasure.

He flits thro the orchard, he visits each tree,
The red flowering peach and the apple's sweet blossoms;
He snaps up *destroyers* wherever they be,
And seizes the caitiffs that lurk in their bosoms;
He drags the vile *grub* from the corn it devours;
The worms from their webs where they riot and welter;
His song and his services freely are ours,
And all that he asks is, in summer a shelter.

The ploughman is pleas'd when he gleans in his train,
Now searching the furrows—now mounting to cheer him;
The gard'ner delights in his sweet simple strain,
And leans on his spade to survey and to hear him;
The slow ling'ring schoolboys forget they'll be chid,
While gazing intent as he warbles before 'em
In mantle of sky-blue, and bosom so red,
That each little loiterer seems to adore him.

When all the gay scenes of the summer are o'er,
And autumn slow enters so silent and fallow,
And millions of warblers, that charm'd us before,
Have fled in the train of the sun-seeking swallow;
The Blue-bird, forsaken, yet true to his home,
Still lingers, and looks for a milder to-morrow,
Till forc'd by the horrors of winter to roam,
He sings his adieu in a lone note of sorrow.

While spring's lovely season, serene, dewy, warm,
The green face of earth, and the pure blue of heav'n,
Or love's native music have influence to charm,
Or sympathy's glow to our feelings are giv'n,
Still dear to each bosom the Blue-bird shall be;
His voice, like the thrillings of hope, is a treasure;
For, thro bleakest storms if a calm he but see,
He comes to remind us of sunshine and pleasure!

The Blue-bird, in summer and Fall, is fond of frequenting open pasture fields; and there perching on the stalks of the great *mullein*, to look out for passing insects. A whole family of them are often seen, thus situated, as if receiving lessons of dexterity from their more expert parents, who can espy a beetle crawling

among the grass, at a considerable distance; and after feeding on it, instantly resume their former position. But whoever informed Dr. Latham that "this bird is never seen on trees, tho it makes its nest in the holes of them!"* might as well have said, that the Americans are never seen in the streets, tho they build their houses by the sides of them. For what is there in the construction of the feet and claws of this bird to prevent it from perching? Or what sight more common to an inhabitant of this country than the Blue-bird perched on the top of a peach or apple-tree; or among the branches of those reverend broad-armed chesnut trees, that stand alone in the middle of our fields, bleached by the rains and blasts of ages?

The Blue-bird is six inches and three quarters in length, the wings remarkably full and broad; the whole upper parts are of a rich sky blue, with purple reflections; the bill and legs are black; inside of the mouth and soles of the feet yellow, resembling the color of a ripe persimmon; the shafts of all the wing and tail feathers are black; throat, neck, breast, and sides partially under the wings, chesnut; wings dusky black at the tips; belly and vent white; sometimes the secondaries are exteriorly light brown, but the bird has in that case not arrived at his full color. The female is easily distinguished by the duller cast of the back, the plumage of which is skirted with light brown, and by the red on the breast being much fainter, and not descending near so low as in the male; the secondaries are also more dusky. This species is found over the whole United States; in the Bahama islands where many of them winter; as also in Mexico, Brazil, and Guiana.

Mr. Edwards mentions that the specimen of this bird which he was favored with, was sent from the Bermudas; and as these islands abound with the cedar, it is highly probable that many of those birds pass from our continent thence, at the commencement

* Synopsis, v. II, p. 446—40.

of winter, to enjoy the mildness of that climate as well as their favorite food.

As the Blue-bird is so regularly seen in winter, after the continuance of a few days of mild and open weather, it has given rise to various conjectures as to the place of his retreat. Some supposing it to be in close sheltered thickets, lying to the sun; others the neighbourhood of the sea, where the air is supposed to be more temperate, and where the matters thrown up by the waves furnish him with a constant and plentiful supply of food. Others trace him to the dark recesses of hollow trees, and subterraneous caverns, where they suppose he dozes away the winter, making, like Robinson Crusoe, occasional reconnoitering excursions from his castle, whenever the weather happens to be favorable. But amidst the snows and severities of winter I have sought for him in vain in the most favorable sheltered situations of the middle states; and not only in the neighbourhood of the sea, but on both sides of the mountains.* I have never, indeed, explored the depths of caverns in search of him, because I would as soon expect to meet with tulips and butterflies there, as Blue-birds; but among hundreds of woodmen, who have cut down trees of all sorts, and at all seasons, I have never heard one instance of these birds being found so immured in winter; while in the whole of the middle and eastern states, the same general observation seems to prevail that the Blue-bird always makes his appearance in winter after a few days of mild and open weather. On the other hand, I have myself found them numerous in the woods of North and South Carolina, in the depth of winter, and I have also been assured by different gentlemen of respectability, who have resided in the islands of Jamaica, Cuba, and the Bahamas and Bermudas, that this very bird is common there in winter. We also find, from the works of Hernandez Piso and others, that it is well known in Mexico, Guiana and Bra-

* I speak of the species here *generally*. Solitary individuals are found, particularly among our cedar trees, sometimes in the very depth of winter.

zil; and if so, the place of its winter retreat is easily ascertained, without having recourse to all the trumpery of holes and caverns, torpidity, hybernation, and such ridiculous improbabilities.

Nothing is more common in Pennsylvania than to see large flocks of these birds in Spring and Fall, passing, at considerable heights in the air; from the south in the former, and from the north in the latter season. I have seen, in the month of October, about an hour after sun-rise, ten or fifteen of them descend from a great height and settle on the top of a tall detached tree, appearing, from their silence and sedateness to be strangers, and fatigued. After a pause of a few minutes they began to dress and arrange their plumage, and continued so employed for ten or fifteen minutes more; then, on a few warning notes being given, perhaps by the leader of the party, the whole remounted to a vast height, steering in a direct line for the south-west. In passing along the chain of the Bahamas towards the West Indies, no great difficulty can occur from the frequency of these islands; nor even to the Bermudas, which are said to be 600 miles from the nearest part of the continent. This may seem an extraordinary flight for so small a bird; but it is nevertheless a fact that it is performed. If we suppose the Blue-bird in this case to fly only at the rate of a mile per minute, which is less than I have actually ascertained him to do over land, ten or eleven hours would be sufficient to accomplish the journey; besides the chances he would have of resting places by the way, from the number of vessels that generally navigate those seas. In like manner two days at most, allowing for numerous stages for rest, would conduct him from the remotest regions of Mexico to any part of the Atlantic states. When the natural history of that part of the continent and its adjacent isles, are better known, and the periods at which its birds of passage arrive and depart, are truly ascertained, I have no doubt but these suppositions will be fully corroborated.

ORCHARD ORIOLE.

ORIOLOUS MUTATUS.

[Plate IV.]

PEALE'S *Museum*, No. 1508.—*Bastard Baltimore*, CATESBY I, 49.—*Le Baltimore Batard*, DE BUFFON III, 233. *Pl. enl.* 506.—*Oriolus Spurius*, GMEL. *Syst.* I, p. 389.—LATH. *Syn.* II, p. 433, 20, p. 437, 24.—BARTRAM, p. 290.

THERE are no circumstances, relating to birds, which tend so much to render their history obscure and perplexing, as the various changes of color which many of them undergo. These changes are in some cases periodical, in others progressive; and are frequently so extraordinary, that, unless the naturalist has resided for years in the country where the birds inhabit, and has examined them at almost every season, he is extremely liable to be mistaken and imposed on by their novel appearance. Numerous instances of this kind might be cited, from the pages of European writers, in which the same bird has been described two, three, and even four different times, by the same person; and each time as a different kind. The species we are now about to examine is a remarkable example of this; and as it has never to my knowledge been either accurately figured or described, I have devoted one plate to the elucidation of its history.

The count de Buffon in introducing what he supposed to be the male of this bird, but which appears evidently to have been the female of the Baltimore Oriole, makes the following observations, which I give in the words of his translator. “This bird is so called (Spurious Baltimore), because the colors of its plumage are not so lively as in the preceding (Baltimore O.). In fact when we compare these birds, and find an exact correspondence in



Oriolus Spurius, Orchard Oriole. 1. Female. 2. and 3. Males of the second and third years.
4. Male in complete plumage. a. Egg of the Orchard Oriole. b. Egg of the Baltimore Oriole.

“ every thing except the colors, and not even in the distribution of
“ these, but only in the different tints they assume; we cannot he-
“ sitate to infer, that the Spurious Baltimore is a variety of a more
“ generous race, degenerated by the influence of climate, or some
“ other accidental cause.”

How the influence of climate could affect one portion of a species and not the other, when both reside in the same climate, and feed nearly on the same food; or what accidental cause could produce a difference so striking, and also so regular, as exists between the two, are I confess, matters beyond my comprehension. But, if it be recollected, that the bird which the Count was thus philosophising upon, was nothing more than the female Baltimore Oriole, which exactly corresponds to the description of his male Bastard Baltimore, the difficulties at once vanish, and with them the whole superstructure of theory founded on this mistake. Dr. Latham also, while he confesses the great confusion and uncertainty that prevail between the true and bastard Baltimore and their females, considers it highly probable that the whole will be found to belong to one and the same species in their different changes of color. In this conjecture, however, the worthy naturalist has likewise been mistaken; and I shall endeavour to point out the fact as well as the source of this mistake.

And here I cannot but take notice of the name which naturalists have bestowed on this bird, and which is certainly remarkable. Specific names, to be perfect, ought to express some peculiarity, common to no other of the genus; and should, at least, be consistent with truth; but in the case now before us, the name has no one merit of the former, nor even that of the latter to recommend it, and ought henceforth to be rejected as highly improper, and calculated, like that of Goatsucker and many others equally ridiculous, to perpetuate that error from which it originated. The word *bastard* among men has its determinate meaning; but when applied to a whole species of birds, perfectly distinct from any

other, originally deriving their peculiarities of form, manners, color, &c. from the common source of all created beings, and perpetuating them, by the usual laws of generation, as unmixed and independent as any other, is, to call it by no worse a name, a gross absurdity. Should the reader be displeased at this, I beg leave to remind him, that as the faithful historian of our feathered tribes, I must be allowed the liberty of vindicating them from every misrepresentation whatever, whether originating in ignorance or prejudice; and of allotting to each respective species, as far as I can distinguish, that rank and place in the great order of nature to which it is entitled.

To convince the foreigner (for Americans have no doubt on the subject) that the present is a distinct species from the Baltimore, it might be sufficient to refer to the figure of the latter, in Plate I, and to fig. 4, Plate IV, of this work. I will however add, that I conclude this bird to be specifically different from the Baltimore, from the following circumstances: its size—it is less, and more slender; its colors, which are different, and *very differently disposed*; the form of its bill which is sharper pointed, and more bent; the form of its tail, which is not *even* but *wedged*; its notes, which are neither so full nor so mellow, and uttered with much more rapidity; its mode of building, and the materials it uses, both of which are different; and lastly, the shape and color of the eggs of each (see figs. *a* and *b*), which are evidently unlike. If all these circumstances, and I could enumerate a great many more, be not sufficient to designate this as a distinct species, by what criterion, I would ask, are we to discriminate between a *variety* and an *original* species, or to assure ourselves, that the Great horned Owl is not in fact a *bastard* Goose, or the carrion Crow a mere *variety* of the Humming-bird?

These mistakes have been occasioned by several causes. Principally by the changes of color to which the birds are subject, and the distance of Europeans from the country they inhabit. Catesby,

it is true, while here, described and figured the Baltimore, and perhaps was the first who published figures of either species; but he entirely omitted saying any thing of the female, and instead of the male and female of the present species, as he thought, he has only figured the male in two of his different dresses; and succeeding compilers have followed and repeated the same error. Another cause may be assigned, *viz.* the extreme shyness of the female Orchard Oriole, represented at fig. 1. This bird has hitherto escaped the notice of European naturalists, or has been mistaken for another species, or perhaps for a young bird of the first season, which it almost exactly resembles. In none of the numerous works on ornithology has it ever before appeared in its proper character; tho the male has been known to Europeans for more than a century, and has usually been figured in one of his dresses as male, and in another as female; these varying according to the fluctuating opinions of different writers. It is amusing to see how gentlemen have groped in the dark in pairing these two species of Orioles, of which the following examples may be given.

Buffon's and Latham's	{ <i>Male</i> —Male Baltimore.
Baltimore Oriole.	{ <i>Female</i> —Male Orchard Oriole, fig. 4.
Spurious Baltimore of	{ <i>Male</i> —Female Baltimore.
Ditto.	{ <i>Female</i> —Male Orchard Oriole, fig. 2.
Pennant's Baltimore O.	{ <i>Male</i> —Male Baltimore.
	{ <i>Female</i> —Young male Baltimore.
Spurious O. of Ditto.	{ <i>Male</i> —Male Orchard O. fig. 4.
	{ <i>Female</i> —Ditto ditto, fig. 2.
Catesby's Baltimore O.	{ <i>Male</i> —Male Baltimore.
	{ <i>Female</i> —Not mentioned.
Spurious B. of Ditto.	{ <i>Male</i> —Male Orchard O. fig. 2.
	{ <i>Female</i> —Ditto ditto, fig. 4.

Among all these authors Catesby is doubtless the most inexcusable, having lived for several years in America, where he had

an opportunity of being more correct; yet when it is considered, that the female of this bird is so much shyer than the male, that it is seldom seen; and that while the males are flying around and bewailing an approach to their nest, the females keep aloof, watching every movement of the enemy in restless but silent anxiety; it is less to be wondered at, I say, that two birds of the same kind but different in plumage, making their appearance together at such times, should be taken for male and female of the same nest, without doubt or examination, as from that strong sympathy for each other's distress, which prevails so universally among them at this season, it is difficult sometimes to distinguish between the sufferer and the sympathising neighbour.

The female of the Orchard Oriole, fig. 1, is six inches and a half in length, and eleven inches in extent, the color above is a yellow olive, inclining to a brownish tint on the back; the wings are dusky brown, lesser wing-coverts tipped with yellowish white, greater coverts and secondaries exteriorly edged with the same, primaries slightly so; tail rounded at the extremity, the two exterior feathers three quarters of an inch shorter than the middle ones, whole lower parts yellow; bill and legs light blue, the former bent a little, very sharp pointed, and black towards the extremity; iris of the eye hazel, pupil black. The young male of the first season corresponds nearly with the above description. But in the succeeding spring he makes his appearance with a large patch of black marking the front, lores and throat, as represented in fig. 2. In this stage, too, the black sometimes makes its appearance on the two middle feathers of the tail; and slight stains of reddish are seen commencing on the sides and belly. The rest of the plumage as in the female. This continuing nearly the same, on the same bird, during the remainder of the season. At the same time other individuals are found as represented by fig. 3, which are at least birds of the third summer. These are mottled with black and olive on the upper parts of the back, and with reddish bay and yellow on

the belly, sides and vent, scattered in the most irregular manner, not alike in any two individuals; and generally the two middle feathers of the tail are black, and the others centered with the same color. This bird is now evidently approaching to its perfect plumage, as represented in fig. 4, where the black spreads over the whole head, neck, upper part of the back, breast, wings and tail, the reddish bay, or bright chesnut, occupying the lower part of the breast, the belly, vent, rump, tail-coverts, and three lower rows of the lesser wing-coverts. The black on the head is deep and velvety; that of the wings inclining to brown; the greater wing-coverts are tipped with white. In the same orchard, and at the same time, males in each of these states of plumage may be found, united to their respective plain-colored mates.

In all these the manners, mode of building, food and notes are, generally speaking, the same, differing no more than those of any other individuals belonging to one common species. The female appears always nearly the same.

I have said that these birds construct their nests very differently from the Baltimores. They are so particularly fond of frequenting orchards, that scarcely one orchard in summer is without them. They usually suspend their nest from the twigs of the apple tree; and often from the extremities of the outward branches. It is formed exteriorly of a particular species of long, tough and flexible grass, knit or sewed thro and thro in a thousand directions, as if actually done with a needle. An old lady of my acquaintance to whom I was one day shewing this curious fabrication, after admiring its texture for some time, asked me in a tone between joke and earnest, whether I did not think it possible to learn these birds to darn stockings? This nest is hemispherical, three inches deep by four in breadth; the concavity scarcely two inches deep by two in diameter. I had the curiosity to detach one of the fibres, or stalks, of dried grass from the nest, and found it to measure thirteen inches in length, and in that distance was thirty-four times

hooked thro and returned, winding round and round the nest! The inside is usually composed of wool, or the light downy appendages attached to the seeds of the *Platanus occidentalis*, or button-wood, which form a very soft and commodious bed. Here and there the outward work is extended to an adjoining twig, round which it is strongly twisted, to give more stability to the whole, and prevent it from being upset by the wind.

When they choose the long pendent branches of the Weeping-willow to build in, as they frequently do, the nest, tho formed of the same materials, is made much deeper, and of slighter texture. The circumference is marked out by a number of these pensile twigs that descend on each side like ribs, supporting the whole; their thick foliage, at the same time, completely concealing the nest from view. The depth in this case is increased to four or five inches, and the whole is made much slighter. These long pendent branches, being sometimes twelve and even fifteen feet in length, have a large sweep in the wind, and render the first of these precautions necessary, to prevent the eggs or young from being thrown out; and the close shelter afforded by the remarkable thickness of the foliage is, no doubt, the cause of the latter. Two of these nests, such as I have here described, are now lying before me, and exhibit not only art in the construction, but judgment in adapting their fabrication so judiciously to their particular situations. If the actions of birds proceeded, as some would have us believe, from the mere impulses of that thing called *instinct*, individuals of the same species would uniformly build their nest in the same manner, wherever they might happen to fix it; but it is evident from these just mentioned, and a thousand such circumstances, that they reason *à priori* from cause to consequence; providently managing with a constant eye to future necessity and convenience.

The eggs, one of which is represented on the same plate (fig. a,) are usually four, of a very pale bluish tint, with a few small specks of brown and spots of dark purple. An egg of the Balti-

more Oriole is exhibited beside it (fig. *b*,); both of these were minutely copied from nature, and are sufficient of themselves to determine, beyond all possibility of doubt, the identity of the two species. I may add, that Mr. Charles W. Peale, proprietor of the Museum in Philadelphia, who, as a practical naturalist, stands deservedly first in the first rank of American connoisseurs; and who has done more for the promotion of that sublime science than all our speculative theorists together, has expressed to me his perfect conviction of the changes which these birds pass thro; having himself examined them both in spring and towards the latter part of summer, and having at the present time in his possession thirty or forty individuals of this species, in almost every gradation of change.

The Orchard Oriole, tho partly a dependent on the industry of the farmer, is no sneaking pilferer, but an open and truly beneficent friend. To all those countless multitudes of destructive bugs and caterpillars that infest the fruit trees in spring and summer, preying on the leaves, blossoms and embryo of the fruit, he is a deadly enemy; devouring them wherever he can find them, and destroying, on an average, some hundreds of them every day, without offering the slightest injury to the fruit, however much it may stand in his way. I have witnessed instances where the entrance to his nest was more than half closed up by a cluster of apples, which he could have easily demolished in half a minute; but, as if holding the property of his patron sacred, or considering it as a natural bulwark to his own, he slid out and in with the greatest gentleness and caution. I am not sufficiently conversant in entomology to particularize the different species of insects on which he feeds; but I have good reason for believing that they are almost altogether such as commit the greatest depredations on the fruits of the orchard; and as he visits us at a time when his services are of the greatest value, and like a faithful guardian, takes up his station where the enemy is most to be expected, he ought to be held

in respectful esteem, and protected by every considerate husbandman. Nor is the gaiety of his song one of his least recommendations. Being an exceedingly active, sprightly and restless bird, he is on the ground—on the trees—flying and carolling in his hurried manner, in almost one and the same instant. His notes are shrill and lively; but uttered with such rapidity and seeming confusion, that the ear is unable to follow them distinctly. Between these he has a single note which is agreeable and interesting. Wherever he is protected he shews his confidence and gratitude by his numbers and familiarity. In the Botanic Gardens of my worthy and scientific friends the Messrs. Bartrams of Kingsess, which present an epitome of almost every thing that is rare, useful, and beautiful in the vegetable kingdom of this western continent, and where the murderous gun scarce ever intrudes, the Orchard Oriole revels without restraint thro thickets of aromatic flowers and blossoms; and, heedless of the busy gardener that labours below, hangs his nest, in perfect security, on the branches over his head.

The female sits fourteen days; the young remain in the nest ten days afterwards, before they venture abroad, which is generally about the middle of June. Nests of this species, with eggs, are sometimes found so late as the 20th of July, which must either belong to birds that have lost their first nest; or it is probable, that many of them raise two brood in the same season, tho I am not positive of the fact.

The Orchard Orioles arrive in Pennsylvania rather later than the Baltimores, commonly about the first week in May; and extend as far as the province of Maine. They are also more numerous towards the mountains than the latter species. In traversing the country near the Blue ridge, in the month of August, I have seen at least five of this species for one of the Baltimore. Early in September they take their departure for the south; their term of residence here being little more than four months. Previous to their departure the young birds become gregarious, and frequent the

rich extensive meadows of the Schuylkill below Philadelphia, in flocks of from thirty to forty or upwards. They are easily raised from the nest, and soon become agreeable domestics. One which I reared and kept thro the winter, whistled with great clearness and vivacity at two months old. It had an odd manner of moving its head and neck slowly and regularly, and in various directions, when intent on observing any thing, without stirring its body. This motion was as slow and regular as that of a snake. When at night a candle was brought into the room, it became restless and evidently dissatisfied, fluttering about the cage as if seeking to get out; but when the cage was placed on the same table with the candle, it seemed extremely well pleased, fed and drank, drest, shook, and arranged its plumage, sat as close to the light as possible, and sometimes chanted a few broken irregular notes in that situation, as I sat writing or reading beside it. I also kept a young female of the same nest, during the greatest part of winter, but could not observe, in that time, any change in its plumage.

GREAT AMERICAN SHRIKE, OR BUTCHER-BIRD.

LANIUS EXCUBITOR?

[Plate V.—Fig. 1.]

La Pie griesche-grise, DE BUFFON I, 296. *Pl. enl.* 445.—PEALE'S *Museum*, No. 664.—
White Whisky-John, *Phil. Trans.* v. LXII, p. 386.—*Arct. Zool.* v. II, No. 127.

THE form and countenance of this bird bespeak him full of courage and energy; and his true character does not belie his appearance, for he possesses these qualities in a very eminent degree. He is represented on the plate rather less than his true size; but in just proportion; and with a fidelity that will enable the European naturalist to determine, whether this be really the same with the great cinereous Shrike (*Lanius Excubitor*, Linn.) of the eastern continent or not; tho the progressive variableness of the plumage, passing, according to age, and sometimes to climate, from ferruginous to pale ash, and even to a bluish white, renders it impossible that this should be an exact representation of every individual.

This species is by no means numerous in the lower parts of Pennsylvania; tho most so during the months of November, December and March. Soon after this it retires to the north, and to the higher inland parts of the country to breed. It frequents the deepest forests; builds a large and compact nest in the upright fork of a small tree; composed outwardly of dry grass, and whitish moss, and warmly lined within with feathers. The female lays six eggs, of a pale cinereous color, thickly marked at the greater end with spots and streaks of rufous. She sits fifteen days. The young are produced early in June, sometimes towards the latter end of May; and during the greater part of the first season are of a brown ferruginous color on the back.



Drawn from nature by A. Wilson.

Engraved by L. Dawson.

1. Great American Shrike, or Butcher Bird. 2. Pine Grosbeak. 3. Ruby-crowned Wren. 4. Shore Lark.

When we compare the beak of this species, with his legs and claws, they appear to belong to two very different orders of birds; the former approaching in its conformation to that of the accipitrine; the latter to those of the pies; and, indeed in his food and manners he is assimilated to both. For tho man has arranged and subdivided this numerous class of animals into separate tribes and families, yet nature has united these to each other by such nice gradations, and so intimately, that it is hardly possible to determine where one tribe ends or the succeeding commences. We therefore find several eminent naturalists classing this genus of birds with the accipitrine, others with the pies. Like the former he preys, occasionally, on other birds; and like the latter on insects, particularly grasshoppers, which I believe to be his principal food; having at almost all times, even in winter, found them in his stomach. In the month of December, and while the country was deeply covered with snow, I shot one of these birds, near the head waters of the Mohawk river, in the state of New York, the stomach of which was entirely filled with large black spiders. He was of a much purer white, above, than any I have since met with; tho evidently of the same species with the present; and I think it probable, that the males become lighter colored as they advance in age, till the minute transverse lines of brown on the lower parts almost disappear.

In his manners he has more resemblance to the pies than to birds of prey, particularly in the habit of carrying off his surplus food as if to hoard it for future exigencies; with this difference, that Crows, Jays, Magpies, &c. conceal theirs at random, in holes and crevices, where perhaps it is forgotten or never again found; while the Butcher-bird sticks his on thorns and bushes, where it shrivels in the sun, and soon becomes equally useless to the hoarder. Both retain the same habits in a state of confinement, whatever the food may be that is presented to them.

This habit of the Shrike of seizing and impaling grasshoppers

and other insects on thorns, has given rise to an opinion, that he places their carcasses there by way of baits, to allure small birds to them, while he himself lies in ambush to surprise and destroy them. In this however they appear to allow him a greater portion of reason and contrivance than he seems entitled to, or than other circumstances will altogether warrant; for we find that he not only serves grasshoppers in this manner, but even small birds themselves, as those have assured me who have kept them in cages in this country, and amused themselves with their manœuvres. If so, we might as well suppose the farmer to be inviting Crows to his corn when he hangs up their carcasses around it, as the Butcher-bird to be decoying small birds by a display of the dead bodies of their comrades!

In the "Transactions of the American Philosophical Society," vol. IV, p. 124, the reader may find a long letter on this subject from Mr. John Heckewelder, of Bethlehem, to Dr. Barton; the substance of which is as follows. That on the 17th of December, 1795, he (Mr. Heckewelder) went to visit a young orchard which had been planted a few weeks before, and was surprised to observe on every one of the trees one, and on some two and three grasshoppers, stuck down on the sharp thorny branches; that on enquiring of his tenant the reason of this, he informed him, that they were stuck there by a small bird of prey called by the Germans *Neuntoedter* (Nine-killer), which caught and stuck nine grasshoppers a day; and he supposed that as the bird itself never fed on grasshoppers, it must do it for pleasure. Mr. Heckewelder now recollected that one of those *Nine-killers* had, many years before, taken a favorite bird of his out of his cage at the window; since which he had paid particular attention to it; and being perfectly satisfied that it lived entirely on mice and small birds, and, moreover, observing the grasshoppers on the trees all fixed in natural positions, as if alive, he began to conjecture that this was done to decoy such small birds as feed on these insects to the spot, that he might have an opportunity

of devouring them. "If it were true," says he, "that this little hawk had stuck them up for himself, how long would he be in feeding on one or two hundred grasshoppers? But if it be intended to seduce the smaller birds to feed on these insects, in order to have an opportunity of catching them, that number, or even one half, or less, may be a good bait all winter," &c. &c.

This is indeed a very pretty fanciful theory, and would entitle our bird to the epithet *Fowler*, perhaps with more propriety than *Lanius*, or *Butcher*; but notwithstanding the attention which Mr. Heckewelder professes to have paid to this bird, he appears not only to have been unacquainted that grasshoppers were in fact the favorite food of this Ninekiller, but never once to have considered, that grasshoppers would be but a very insignificant and tasteless bait for our winter birds, which are chiefly those of the finch kind, that feed almost exclusively on hard seeds and gravel; and among whom five hundred grasshoppers might be stuck up on trees and bushes, and remain there untouched by any of them forever. Besides, where is his necessity of having recourse to such refined stratagems, when he can at any time seize upon small birds by mere force of flight? I have seen him, in an open field, dart after one of our small sparrows, with the rapidity of an arrow, and kill it almost instantly. Mr. William Bartram long ago informed me, that one of these Shrikes had the temerity to pursue a Snow-bird (*F. Hudsonia*), into an open cage, which stood in the garden; and before they could arrive to its assistance, had already strangled and scalped it, tho he lost his liberty by the exploit. In short, I am of opinion, that his resolution and activity are amply sufficient to enable him to procure these small birds whenever he wants them, which I believe is never but when hard pressed by necessity, and a deficiency of his favorite insects; and that the Crow or the Blue Jay may with the same probability be supposed to be laying baits for mice and flying squirrels when they are hoarding their Indian corn, as he for birds while thus disposing of the exuberance of his

favorite food. Both the former and the latter retain the same habits in a state of confinement; the one filling every seam and chink of his cage with grain, crumbs of bread, &c. and the other sticking up, not only insects, but flesh, and the bodies of such birds as are thrown in to him, on nails or sharpened sticks, fixed up for the purpose. Nor, say others, is this practice of the Shrike difficult to be accounted for. Nature has given to this bird a strong, sharp and powerful beak, a broad head, and great strength in the muscles of his neck; but his legs, feet and claws are by no means proportionably strong; and are unequal to the task of grasping and tearing his prey, like those of the Owl and Falcon kind. He therefore wisely avails himself of the powers of the former, both in strangling his prey, and in tearing it to pieces while feeding.

The character of the Butcher-bird is entitled to no common degree of respect. His activity is visible in all his motions; his courage and intrepidity beyond every other bird of his size (one of his own tribe only excepted, *L. Tyrannus*, or King-bird); and in affection for his young he is surpassed by no other. He associates with them in the latter part of summer, the whole family hunting in company. He attacks the largest Hawk or Eagle in their defence, with a resolution truly astonishing; so that all of them respect him; and on every occasion decline the contest. As the snows of winter approach, he descends from the mountainous forests, and from the regions of the north, to the more cultivated parts of the country, hovering about our hedge-rows, orchards and meadows, and disappears again early in April.

The Great American Shrike is ten inches in length, and thirteen in extent; the upper part of the head, neck and back is pale cinereous; sides of the head nearly white, crossed with a bar of black that passes from the nostril thro the eye to the middle of the neck; the whole under parts, in some specimens, are nearly white, in others more dusky, and thickly marked with minute transverse curving lines of light brown; the wings are black, tipped with white,

with a single spot of white on the primaries, just below their coverts; the scapulars, or long downy feathers that fall over the upper part of the wing, are pure white; the rump and tail-coverts a very fine grey or light ash; the tail is cuneiform, consisting of twelve feathers, the two middle ones wholly black, the others tipped more and more with white to the exterior ones, which are nearly all white; the legs, feet and claws are black; the beak straight, thick, of a light blue color, the upper mandible furnished with a sharp process, bending down greatly at the point, where it is black, and beset at the base with a number of long black hairs or bristles; the nostrils are also thickly covered with recumbent hairs; the iris of the eye is a light hazel; pupil black. The figure on the plate will give a perfect idea of the bird. The female is easily distinguished by being ferruginous on the back and head; and having the band of black extending only *behind* the eye, and of a dirty brown or burnt color; the under parts are also something rufous, and the curving lines more strongly marked; she is rather less than the male, which is different from birds of prey in general, the females of which are usually the larger of the two.

In the Arctic Zoology we are told, that this species is frequent in Russia, but does not extend to Siberia; yet one was taken within Behring's straits, on the Asiatic side, in lat. 66°; and the species probably extends over the whole continent of North America, from the Western ocean. Mr. Bell, while on his travels thro Russia, had one of these birds given him, which he kept in a room, having fixed up a sharpened stick for him in the wall; and on turning small birds loose in the room, the Butcher-bird instantly caught them by the throat in such a manner as soon to suffocate them; and then stuck them on the stick, pulling them on with bill and claws; and so served as many as were turned loose, one after another, on the same stick.*

* Edwards, v. VII, p. 231.

PINE GROSBEAK.

LOXIA ENUCLEATOR.

[Plate V.—Fig. 2.]

Loxia Eucleator, LINN. *Syst.* I, p. 299, 3.—*Le Dur-bec, ou Gros-bec de Canada*, BUFFON III, p. 457. *Pl. enl.* 135, 1.—EDW. 123, 124.—LATH. *Syn.* III, p. 111, 5.—PEALE'S *Museum*, No. 5652.

THIS is perhaps one of the gayest plumaged land birds that frequent the inhospitable regions of the north, whence they are driven, as if with reluctance, by the rigors of winter, to visit Canada and some of the northern and middle states; returning to Hudson's Bay so early as April. The specimen from which our drawing was taken was shot on a cedar tree, a few miles to the north of Philadelphia, in the month of December; and a faithful resemblance of the original, as it then appeared, is exhibited in the plate. A few days afterwards another bird of the same species was killed not far from Gray's ferry, four miles south from Philadelphia, which proved to be a female. In this part of the state of Pennsylvania they are rare birds, and seldom seen. As they do not, to my knowledge, breed in any part of this state, I am unable from personal observation to speak of their manners or musical talents. Mr. Pennant says they sing on their first arrival in the country round Hudson's Bay, but soon become silent; make their nest on trees, at a small height from the ground, with sticks, and line it with feathers. The female lays four white eggs, which are hatched in June. Forster observes, that they visit Hudson's Bay only in May, on their way to the north; and are not observed to return in the autumn; and that their food consists of birch-willow buds, and others of the same nature.*

* Phil. Trans. LXII, p. 402.

The Pine Grosbeak measures nine inches in length, and fourteen inches in extent; the head, neck, breast and rump is of a rich crimson, palest on the breast; the feathers on the middle of the back are centered with arrow-shaped spots of black, and skirted with crimson, which gives the plumage a considerable flush of red there; those on the shoulders are of a deep slate color, partially skirted with red and light ash. The greater wing-coverts and next superior row are broadly tipped with white, and slightly tinged with reddish; wings and tail black, edged with light brown; tail considerably forked; lower part of the belly ash color; vent feathers skirted with white, and streaked with black; legs glossy black; bill a brownish horn color, very thick, short and hooked at the point; the upper mandible overhanging the lower considerably, approaching in its form to that of the parrot; base of the bill covered with recumbent hairs of a dark brown color. The whole plumage, near the roots, as in most other birds, is of a deep bluish ash color. The female was half an inch shorter, and answered nearly to the above description; only, those parts that in the male were crimson, were in her of a dirty yellowish color. The female, according to Forster, referred to above, has those parts which in the male are red, more of an orange tint; and he censures Edwards for having represented the female of too bright a red. It is possible, that my specimen of the female might have been a bird of the first season, not come to its full colors. Those figured by Mr. Edwards* were both brought from Hudson's Bay, and appear to be the same with the one now before us, tho his coloring of the female differs materially from his description.

If this, as Mr. Pennant asserts, be the same species with that of the eastern continent, it would seem to inhabit almost the whole extent of the arctic regions. It is found in the north of Scotland, where Pennant suspects it breeds. It inhabits Europe as far north

* Edw. vol. III, p. 124.

as Dronthien; is common in all the pine forests of Asia, in Siberia, and the north of Russia, is taken in autumn about Petersburg, and brought to market in great numbers. It returns to Lapland in spring; is found in Newfoundland; and on the western coast of North America.*

Were I to reason from analogy, I would say, that from the great resemblance of this bird to the Purple-finch (*Frin. purpurea*), it does not attain its full plumage until the second summer; and is subject to considerable change of color in moulting, which may have occasioned all the differences we find concerning it in different authors. But this is actually ascertained to be the case; for Mr. Edwards saw two of these birds alive in London, in cages; the person in whose custody they were, said they came from Norway; that they had moulted their feathers, and were not afterwards so beautiful as they were at first. One of them, he says, was colored very much like the Green-finch (*L. Chloris*). The Purple-finch, tho much smaller, has the rump, head, back and breast nearly of the same color as the Pine Grosbeak, feeds in the same manner, on the same food, and is also subject to like changes of color.

Since writing the above I have kept one of these Pine Grosbeaks, a male, for more than half a year. In the month of August those parts of the plumage which were red became of a greenish yellow, and continue so still. In May and June its song, tho not so loud as some birds of its size, was extremely clear, mellow and sweet. It would warble out this for a whole morning together, and acquired several of the notes of a Red-bird (*L. cardinalis*), that hung near it. It is exceedingly tame and familiar, and when it wants food or water utters a continual melancholy and anxious note. It was caught in winter near the North river, thirty or forty miles above New York.

* Pennant.

RUBY-CROWNED WREN.

SYLVIA CALENDULA.

[Plate V.—Fig. 3.]

Le Roitelet Rubis, DE BUFF. V, 373.—EDW. 254.—LATH. *Syn.* II, 511.—*Arct. Zool.* 320.
 —*Regulus cristatus alter vertice rubini coloris*, BARTRAM, p. 292.—PEALE'S *Museum*,
 No. 7244.

THIS little bird visits us early in the spring from the south, and is generally first found among the maple blossoms, about the beginning of April. These failing, it has recourse to those of the peach, apple and other fruit trees, partly for the tops of the sweet and slender stamina of the flowers, and partly for the winged insects that hover among them. In the middle of summer I have rarely met with these birds in Pennsylvania; and as they penetrate as far north as the country round Hudson's Bay, and also breed there, it accounts for their late arrival here in Fall. They then associate with the different species of Titmouse, and the Golden-crested Wren; and are particularly numerous in the month of October and beginning of November in orchards, among the decaying leaves of the apple-trees, that at that season are infested with great numbers of small, black, winged insects, among which they make great havock. I have often regretted the painful necessity one is under of taking away the lives of such inoffensive useful little creatures, merely to obtain a more perfect knowledge of the species; for they appear so busy, so active and unsuspecting, as to continue searching about the same twig, even after their companions have been shot down beside them. They are more remarkably so in autumn; which may be owing to the great number of young and inexperienced birds which are then among them; and frequently

at this season I have stood under the tree, motionless, to observe them, while they gleaned among the low branches, sometimes within a foot or two of my head. They are extremely adroit in catching their prey; have only at times a feeble chirp; visit the tops of the tallest trees as well as the lowest bushes; and continue generally for a considerable time among the branches of the same tree, darting about from place to place; appearing, when on the top of a high maple, no bigger than humble-bees.

The Ruby-crowned Wren is four inches long, and six in extent; the upper parts of the head, neck and back are of a fine greenish olive, with a considerable tinge of yellow; wings and tail dusky purplish brown, exteriorly edged with yellow olive; secondaries and first row of wing-coverts edged and tipped with white, with a spot of deep purplish brown across the secondaries, just below their coverts; the hind head is ornamented with an oblong lateral spot of vermilion, usually almost hid by the other plumage; round the eye a ring of yellowish white; whole under parts of the same tint; legs dark brown; feet and claws yellow; bill slender, straight, not notched, furnished with a few black hairs at the base; inside of the mouth orange. The female differs very little in its plumage from the male, the colors being less lively, and the bird somewhat less. Notwithstanding my utmost endeavours, I have never been able to discover their nest; tho from the circumstance of having found them sometimes here in summer, I am persuaded that they occasionally breed in Pennsylvania; but I know several birds, no larger than this, that usually build on the extremities of the tallest trees in the woods; which I have discovered from their beginning before the leaves are out; many others, no doubt, choose similar situations; and should they delay building until the woods are thickened with leaves it is no easy matter to discover them. In Fall they are so extremely fat as almost to dissolve between the fingers as you open them; owing to the great abundance of their favorite insects at that time.

SHORE LARK.

ALAUDA ALPESTRIS.

[Plate V.—Fig. 4]

Alauda alpestris, LINN. *Syst.* 289.—LATH. *Syn.* II, 385.—PEALE'S *Museum*, No. 5190.—
Alauda campestris gutture flavo, BARTRAM, p. 290.—*L'Alouette de Virginie*, DE BUFF. V,
 55.—CATESB. I, 32.

THIS is the most beautiful of its genus, at least in this part of the world. It is one of our winter birds of passage, arriving from the north in the Fall; usually staying with us the whole winter, frequenting sandy plains and open downs, and is numerous in the southern states, as far as Georgia, during that season. They fly high, in loose scattered flocks; and at these times have a single cry, almost exactly like the Sky-Lark of Britain. They are very numerous in many tracts of New Jersey; and are frequently brought to Philadelphia market. They are then generally very fat, and are considered excellent eating. Their food seems principally to consist of small round compressed black seeds, buckwheat, oats, &c. with a large proportion of gravel. On the flat commons, within the boundaries of the city of Philadelphia; flocks of them are regularly seen during the whole winter. In the stomach of these I have found, in numerous instances, quantities of the eggs or larvæ of certain insects, mixed with a kind of slimy earth. About the middle of March they generally disappear, on their route to the north. Forster informs us, that they visit the environs of Albany fort, in the beginning of May; but go farther north to breed; that they feed on grass seeds, and buds of the sprig birch, and run into small holes, keeping close to the ground; from whence the natives call them *chi-chup-pi-sue*.* This same species appears also to be found

* Phil. Trans. vol. LXII, p. 398.

in Poland, Russia, and Siberia in winter, from whence they also retire farther north on the approach of spring; except in the north-east parts, and near the high mountains.*

The length of this bird is seven inches, the extent twelve inches; the forehead, throat, sides of the neck, and line over the eye is of a delicate straw or Naples yellow, elegantly relieved by a bar of black, that passes from the nostril to the eye, below which it falls, rounding, to the depth of three quarters of an inch; the yellow on the forehead and over the eye is bounded, within, for its whole length, with black, which covers part of the crown; the breast is ornamented with a broad fan-shaped patch of black; this as well as all the other spots of black are marked with minute curves of yellow points; back of the neck, and towards the shoulders a light drab tinged with lake; lesser wing-coverts bright cinnamon; greater wing-coverts the same, interiorly dusky, and tipped with whitish; back and wings drab-colored, tinged with reddish, each feather of the former having a streak of dusky black down its center; primaries deep dusky, tipped and edged with whitish; exterior feathers most so; secondaries broadly edged with light drab, and scalloped at the tips; tail forked, black; the two middle feathers, which by some have been mistaken for the coverts, are reddish drab, centered with brownish black; the two outer ones on each side exteriorly edged with white; breast of a dusky vinous tinge, and marked with spots or streaks of the same; the belly and vent white; sides streaked with bay; bill short (Latham, in mistake, says seven inches†), of a dusky blue color; tongue truncate and bifid; legs and claws black; hind heel very long and almost straight; iris of the eye hazel. One glance at the figure on the plate will give a better idea than the whole of this minute description, which, however, has been rendered necessary by the errors of others. The female has little or no black on the crown; and the yellow on the front is narrow, and of a dirty tinge.

* Arct. Zool.

† Syn. vol. II, p. 385.

There is a singular appearance in this bird which I have never seen taken notice of by former writers, *viz.* certain long black feathers, which extend, by equal distances beyond each other, above the eye-brow; these are longer, more pointed, and of a different texture from the rest around them; and the bird possesses the power of erecting them so as to appear as if horned, like some of the Owl tribe. Having kept one of these birds alive for some time I was much amused at this odd appearance; and think it might furnish a very suitable specific appellation, *viz.* *Alauda cornuta*, or Horned Lark. These horns become scarcely perceivable after the bird is dead. The head is slightly crested.

Shore Lark and Sky Lark are names by which this species is usually known in different parts of the union. They are said to sing well; mounting in the air, in the manner of the Song Lark of Europe; but this is only in those countries where they breed. I have never heard of their nests being found within the territory of the United States.

MARYLAND YELLOW-THROAT.

SYLVIA MARILANDICA.

[Plate VI.—Fig. 1.]

Turdus trichas, LINN. *Syst.* I, 293.—EDW. 237.—*Yellow-breasted Warbler*, *Arct. Zool.* II, No. 283. *Id.* 284.—*Le Figuier aux joues noires*, DE BUFF. V, 292.—*La Fauvette à poitrine jaune de la Louisiane*, BUFF. V, 162. *Pl. enl.* 709, *fig.* 2.—LATH. *Syn.* IV, 433, 32.—PEALE'S *Museum*, No. 6902.

THIS is one of the humble inhabitants of briars, brambles, alder bushes, and such shrubbery as grow most luxuriantly in low watery situations, and might with propriety be denominated *Humility*, its business or ambition seldom leading it higher than the tops of the underwood. Insects and their larvæ are its usual food. It dives into the deepest of the thicket, rambles among the roots, searches round the stems, examines both sides of the leaf, raising itself on its legs so as to peep into every crevice; amusing itself at times with a very simple, and not disagreeable, song or twitter, *whitititee, whitititee, whitititee*; pausing for half a minute or so, and then repeating its notes as before. It inhabits the whole United States from Maine to Florida, and also Louisiana; and is particularly numerous in the low swampy thickets of Maryland, Pennsylvania and New Jersey. It is by no means shy; but seems deliberate and unsuspicious, as if the places it frequented, or its own diminutiveness, were its sufficient security. It often visits the fields of growing rye, wheat, barley, &c. and no doubt performs the part of a friend to the farmer, in ridding the stalks of vermin, that might otherwise lay waste his fields. It seldom approaches the farmhouse, or city; but lives in obscurity and peace amidst his favorite thickets. It arrives in Pennsylvania about the middle, or last week,



Drawn from Nature by W. Wilson.

1. Maryland Yellow throat. 2. Yellow breasted Chat. 3. Summer Red Bird. 4. Female. 5. Indigo Bird. 6. American Redstart.

of April, and begins to build its nest about the middle of May: this is fixed on the ground, among the dried leaves, in the very depth of a thicket of briars, sometimes arched over, and a small hole left for entrance; the materials are dry leaves and fine grass, lined with coarse hair; the eggs are five, white, or semi-transparent, marked with specks of reddish brown. The young leave the nest about the twenty-second of June; and a second brood is often raised in the same season. Early in September they leave us, returning to the south.

This pretty little species is four inches and three quarters long; and six inches and a quarter in extent; back, wings, and tail green olive, which also covers the upper part of the neck, but approaches to cinereous on the crown; the eyes are inserted in a band of black, which passes from the front, on both sides, reaching half way down the neck; this is bounded above by another band of white, deepening into light blue; throat, breast and vent brilliant yellow; belly a fainter tinge of the same color; inside coverts of the wings also yellow; tips and inner vanes of the wings dusky brown; tail cuneiform, dusky, edged with olive-green; bill black, straight, slender, of the true *Motacilla* form; tho the bird itself was considered as a species of Thrush by Linnæus; but very properly removed to the genus *Motacilla* by Gmelin; legs flesh colored; iris of the eye dark hazel. The female wants the black band thro the eye, has the bill brown, and the throat of a much paler yellow. This last, I have good reason to suspect, has been described by Europeans as a separate species; and that from Louisiana, referred to in the synonyms, appears evidently the same as the former; the chief difference, according to Buffon, being in its wedged tail, which is likewise the true form of our own species; so that this error corrected will abridge the European nomenclature of two species. Many more examples of this kind will occur in the course of our descriptions.

YELLOW-BREASTED CHAT.

PIPRA POLYGLOTTA.

[Plate VI.—Fig. 2.]

Muscicapa viridis, GMEL. *Syst.* I, 936.—*Le Merle vert de la Caroline*, BUFFON III, 396.—*Chattering Flycatcher*, *Arct. Zool.* II, No. 266.—LATH. *Syn.* III, 350, 48.—*Garrulus Australis*, BARTRAM, 290.—PEALE'S *Museum*, No. 6661.

THIS is a very singular bird. In its voice and manners, and the habit it has of keeping concealed, while shifting and vociferating around you, it differs from most other birds with which I am acquainted; and has considerable claims to originality of character. It arrives in Pennsylvania about the first week in May, and returns to the south again as soon as its young are able for the journey, which is usually about the middle of August; its term of residence here being scarcely four months. The males generally arrive several days before the females, a circumstance common with many other of our birds of passage.

When he has once taken up his residence in a favorite situation, which is almost always in close thickets of hazel, brambles, vines, and thick underwood, he becomes very jealous of his possessions, and seems offended at the least intrusion; scolding every passenger as soon as they come within view, in a great variety of odd and uncouth monosyllables, which it is difficult to describe, but which may be readily imitated so as to deceive the bird himself, and draw him after you for half a quarter of a mile at a time, as I have sometimes amused myself in doing, and frequently without once seeing him. On these occasions his responses are constant and rapid, strongly expressive of anger and anxiety; and while the bird itself remains unseen, the voice shifts from place to place,

among the bushes, as if it proceeded from a spirit. First are heard a repetition of short notes, resembling the whistling of the wings of a duck or teal, beginning loud and rapid, and falling lower and slower till they end in detached notes; then a succession of others, something like the barking of young puppies, is followed by a variety of hollow guttural sounds, each eight or ten times repeated, more like those proceeding from the throat of a quadruped than that of a bird; which are succeeded by others not unlike the mew-ing of a cat, but considerably hoarser. All these are uttered with great vehemence, in such different keys, and with such peculiar modulations of voice, as sometimes to seem at a considerable distance and instantly as if just beside you; now on this hand, now on that; so that from these manœuvres of ventriloquism you are utterly at a loss to ascertain from what particular spot or quarter they proceed. If the weather be mild and serene, with clear moonlight, he continues gabbling in the same strange dialect, with very little intermission, during the whole night, as if disputing with his own echoes; but probably with a design of inviting the passing females to his retreat; for when the season is farther advanced they are seldom heard during the night.

About the middle of May they begin to build. Their nest is usually fixed in the upper part of a bramble bush, in an almost impenetrable thicket; sometimes in a thick vine or small cedar; seldom more than four or five feet from the ground. It is composed outwardly of dry leaves, within these are laid thin strips of the bark of grape-vines, and the inside is lined with fibrous roots of plants, and fine dry grass. The female lays four eggs, slightly flesh-colored, and speckled all over with spots of brown or dull red. The young are hatched in twelve days; and make their first excursion from the nest about the second week in June. A friend of mine, an amateur in Canary birds, placed one of the Chat's eggs under a hen Canary, who brought it out; but it died on the second day; tho she was so solicitous to feed and preserve it, that her own eggs,

which required two days more sitting, were lost thro her attention to this.

While the female of the Chat is sitting, the cries of the male are still more loud and incessant. When once aware that you have seen him he is less solicitous to conceal himself; and will sometimes mount up into the air, almost perpendicularly, to the height of thirty or forty feet, with his legs hanging; descending, as he rose, by repeated jerks, as if highly irritated, or as is vulgarly said "dancing mad." All this noise and gesticulation we must attribute to his extreme affection for his mate and young; and when we consider the great distance which in all probability he comes, the few young produced at a time, and that seldom more than once in the season, we can see the wisdom of providence very manifestly in the ardency of his passions.

Mr. Catesby seems to have first figured the Yellow-breasted Chat; and the singularity of its manners has not escaped him. After repeated attempts to shoot one of them, he found himself completely baffled; and was obliged, as he himself informs us, to employ an Indian for that purpose, who did not succeed without exercising all his ingenuity. Catesby also observed its dancing manœuvres, and supposed that it always flew with its legs extended; but it is only in these paroxysms of rage and anxiety that this is done, as I have particularly observed.

The food of these birds consists chiefly of large black beetles, and other coleopterous insects; I have also found whortle-berries frequently in their stomach, in great quantities; as well as several other sorts of berries. They are very numerous in the neighbourhood of Philadelphia, particularly on the borders of rivulets, and other watery situations, in hedges, thickets, &c. but are seldom seen in the forest, even where there is underwood. Catesby indeed asserts, that they are only found on the banks of large rivers, two or three hundred miles from the sea; but tho this may be the case, in South Carolina, yet in Maryland and New Jersey, and also in

New York I have met with these birds within two hours' walk of the sea, and in some places within less than a mile of the shore. I have not been able to trace him to any of the West India islands; tho they certainly retire to Mexico, Guiana and Brazil, having myself seen skins of these birds in the possession of a French gentleman, which were brought from the two latter countries.

By recurring to the synonyms at the beginning of this article, it will be perceived how much European naturalists have differed in classing this bird. That the judicious Mr. Pennant, Gmelin, and even Dr. Latham, however, should have arranged it with the Flycatchers, is certainly very extraordinary; as neither in the particular structure of its bill, tongue, feet, nor in its food or manners, has it any affinity whatever to that genus. Some other ornithologists have removed it to the Tanagers; but the bill of the Chat when compared with that of the Summer Red-bird in the same plate, bespeaks it at once to be of a different tribe. Besides, the Tanagers seldom lay more than two or three eggs—the Chat usually four; the former build on trees; the latter in low thickets. In short, tho this bird will not exactly correspond with any known genus, yet the form of its bill, its food, and many of its habits, would almost justify us in classing it with the genus *Pipra* (Manakin), to which family it seems most nearly related.

The Yellow-breasted Chat is seven inches long, and nine inches in extent; the whole upper parts are of a rich and deep olive green, except the tips of the wings, and interior vanes of the wing and tail feathers, which are dusky brown; the whole throat and breast is of a most brilliant yellow, which also lines the inside of the wings and spreads on the sides immediately below; the belly and vent are white; the front slate-colored, or dull cinereous; lores black; from the nostril a line of white extends to the upper part of the eye, which it nearly encircles; another spot of white is placed at the base of the lower mandible; the bill is strong, slightly curved, sharply ridged on the top, compressed, over-hanging a little at

the tip, not notched, pointed, and altogether black; the tongue is tapering, more fleshy than those of the *Muscicapa* tribe, and a little lacerated at the tip; the nostril is oval, and half covered with an arching membrane; legs and feet light blue, hind claw rather the strongest, the two exterior toes united to the second joint.

The female may be distinguished from the male by the black and white adjoining the eye being less intense or pure than in the male; and in having the inside of the mouth of a dirty flesh color, which in the male is black; in other respects their plumage is nearly alike.

SUMMER RED-BIRD.

TANAGRA ÆSTIVA.

[Plate VI.—Figs. 3 and 4.]

Tanagra Mississipensis, LATH. *Ind. Orn.* I, 421, 5.—*Mexican Tanager*, LATHAM *Syn.* III, 219, 5, B.—*Tanagra variegata*, *Ind. Orn.* I, 421, 6.—*Tanagra æstiva*, *Ind. Orn.* I, 422, 7.—*Muscicapa rubra*, LINN. *Syst.* I, 326, 8.—BUFF. VI, 252. *Pl. enl.* 741.—CATESB. *Car.* I, 56.—*Merula flammula*, *Sandhill Red-bird*, BARTRAM, 299.—PEALE'S *Museum*, No. 6134.

THE change of color which this bird is subject to during the first year, and the imperfect figure first given of it by Catesby, have deceived the European naturalists so much, that four different species have been formed out of this one, as appears by the above synonyms, all of which are referable to the present species, the Summer Red-bird. As the female differs so much in color from the male, it has been thought proper to represent them both; the female having never to my knowledge appeared in any former publication; and all the figures of the other, that I have seen, being little better than *caricatures*, from which a foreigner can form no just conception of the original.

The male of the Summer Red-bird (fig. 3.) is wholly of a rich vermilion color, most brilliant on the lower parts, except the inner vanes and tips of the wings, which are of a dusky brown; the bill is disproportionably large, and inflated, the upper mandible furnished with a process, and the whole bill of a yellowish horn color; the legs and feet are light blue inclining to purple; the eye large, the iris of a light hazel color; the length of the whole bird seven inches and a quarter, and between the tips of the expanded wings twelve inches. The female (fig. 4.) differs little in size from the male; but is above of a brownish yellow olive, lightest over the

eye; throat, breast, and whole lower part of the body of a dull orange yellow; tips and interior vanes of the wings brown; bill, legs, and eye as in the male. The nest is built in the woods on the horizontal branch of a half grown tree, often an evergreen, at the height of ten or twelve feet from the ground, composed outwardly of broken stalks of dry flax, and lined with fine grass; the female lays three light blue eggs; the young are produced about the middle of June; and I suspect that the same pair raise no more than one brood in a season, for I have never found their nests but in May or June. Towards the middle of August they take their departure for the south, their residence here being scarcely four months. The young are at first of a green olive above, nearly the same color as the female below, and do not acquire their full tints till the succeeding spring or summer.

The change, however, commences the first season before their departure. In the month of August the young males are distinguished from the females by their motleyed garb; the yellow plumage below, as well as the olive green above, first becoming stained with spots of a buff color, which gradually brighten into red; these being irregularly scattered over the whole body, except the wings and tail, particularly the former, which I have often found to contain four or five green quills in the succeeding June. The first of these birds I ever shot was green-winged; and conceiving it at that time to be a non-descript, I made a drawing of it with care; and on turning to it at this moment I find the whole of the primaries, and two of the secondaries yellowish green, the rest of the plumage a full red. This was about the middle of May. In the month of August, of the same year, being in the woods with the gun, I perceived a bird of very singular plumage, and having never before met with such an oddity, instantly gave chase to it. It appeared to me, at a small distance, to be sprinkled all over with red, green and yellow. After a great deal of difficulty, for the bird had taken notice of my eagerness, and had become extremely shy, I succeeded

in bringing it down; and found it to be a young bird of the same species with the one I had killed in the preceding May, but less advanced to its fixed colors; the wings entirely of a greenish yellow, and the rest of the plumage spotted in the most irregular manner, with red, yellow, brown and greenish. This is the *variegated* Tanager, referred to in the synonyms prefixed to this article. Having, since that time, seen them in all their stages of color, during their residence here, I have the more satisfaction in assuring the reader that the whole four species mentioned by Dr. Latham are one and the same. The two figures in our plate represent the male and female in their complete plumage, and of their exact size.

The food of these birds consists of various kinds of bugs, and large black beetles. In several instances I have found the stomach entirely filled with the broken remains of humble bees. During the season of whortle-berries they seem to subsist almost entirely on these berries; but in the early part of the season on insects of the above description. In Pennsylvania they are a rare species, having myself sometimes passed a whole summer without seeing one of them; while in New Jersey, even within half a mile of the shore opposite the city of Philadelphia, they may generally be found during the season.

The note of the male is a strong and sonorous whistle, resembling a loose trill or shake on the notes of a fife, frequently repeated; that of the female is rather a kind of chattering, approaching nearly to the *rapid* pronunciation of *chicky-tucky-tuck, chicky-tucky-tuck*, when she sees any person approaching the neighbourhood of her nest. She is, however, rarely seen, and usually mute, and scarcely to be distinguished from the color of the foliage at a distance; while the loquacity and brilliant red of the male make him very conspicuous; and when seen among the green leaves, particularly if the light falls strongly on his plumage, he has a most beautiful and elegant appearance. It is worthy of remark, that the females of almost all our splendid feathered birds are drest in plain

and often obscure colors, as if Providence meant to favor their personal concealment, and consequently that of their nest and young from the depredations of birds of prey; while among the latter, such as Eagles, Owls, Hawks, &c. which are under no such apprehension, the females are uniformly covered with richer colored plumage than the males.

The Summer Red-bird delights in a flat sandy country covered with wood, and interspersed with pine trees, and is consequently more numerous towards the shores of the Atlantic than in the interior. In both Carolinas, and in Georgia and Florida, they are in great plenty. In Mexico some of them are probably resident, or at least winter there; as many other of our summer visitants are known to do. In the northern states they are very rare; and I do not know that they have been found either in Upper or Lower Canada. Du Pratz, in his History of Louisiana, has related some particulars of this bird, which have been repeated by almost every subsequent writer on the subject, *viz.* that "it inhabits the woods on the Mississippi, and collects against winter a vast magazine of maize, which it carefully conceals with dry leaves, leaving only a small hole for entrance; and is so jealous of it, as never to quit its neighbourhood except to drink." It is probable, tho I cannot corroborate the fact, that individuals of this species may winter near the Mississippi; but that in a climate so moderate, and where such an exuberance of fruits, seeds and berries are to be found, even during winter, this or any other bird should take so much pains in hoarding a vast quantity of Indian corn, and attach itself so closely to it, is rather apocryphal. The same writer, vol. ii, p. 24, relates similar particulars of the Cardinal Grosbeak (*Loxia Cardinalis*), which, tho it winters in Pennsylvania, where the climate is much more severe, and where the length and rigors of that season would require a far larger magazine, and be a three-fold greater stimulus to hoarding, yet has no such habit here. Besides I have never found a single grain of Indian corn in the stomach of the Summer

Red-bird; tho I have examined many individuals of both sexes. On the whole, I consider this account of Du Pratz's in much the same light with that of his countryman Charlevoix, who gravely informs us, that the Owls of Canada lay up a store of live mice for winter, the legs of which they first break, to prevent them from running away, and then feed them carefully, and fatten them, till wanted for use.*

Its manners, tho neither its bill nor tongue, partake very much of those of the Flycatcher; for I have frequently observed both male and female, a little before sunset, in parts of the forest clear of underwood, darting after winged insects, and continuing thus engaged till it was almost dusk.

* Travels in Canada, vol. I, p. 239. Lond. 1761. 8vo.

INDIGO BIRD.

FRINGILLA CYANEA.

[Plate VI.—Fig. 5.]

Tanagra cyanea, LINN. *Syst.* I, 315.—*Le Ministre*, BUFFON IV, 86.—*Indigo Bunting*, *Arct. Zool.* II, No. 235.—LATH. *Syn.* III, 205, 63.—*Blue Linnet*, EDW. 273.—PEALE'S *Museum*, No. 6002.—*Linaria cyanea*, BARTRAM, p. 290.

THIS is another of those rich-plumaged tribes that visit us in Spring from the regions of the south. It arrives in Pennsylvania on the second week in May; and disappears about the middle of September. It is numerous in all the settled parts of the middle and eastern states; in the Carolinas and Georgia it is also abundant. Tho Catesby says that it is only found at a great distance from the sea; yet round the city of New York, and in many places along the shores of New Jersey, I have met with them in plenty. I may also add, on the authority of Mr. William Bartram, that "they inhabit the continent and sea-coast islands, from Mexico to Nova Scotia, from the sea-coast west beyond the Apalachian and Cherokee mountains."* They are also known in Mexico, where they probably winter. Its favorite haunts, while with us, are about gardens, fields of deep clover, the borders of woods, and road sides, where it is frequently seen perched on the fences. In its manners it is extremely active and neat; and a vigorous and pretty good songster. It mounts to the highest tops of a large tree and chants for half an hour at a time. Its song is not one continued strain, but a repetition of short notes, commencing loud and rapid, and falling by almost imperceptible gradations for six or eight seconds,

* Travels, p. 299.

till they seem hardly articulate, as if the little minstrel were quite exhausted; and after a pause of half a minute or less, commences again as before. Some of our birds sing only in Spring, and then chiefly in the morning, being comparatively mute during the heat of noon; but the Indigo-bird chants with as much animation under the meridian sun, in the month of July, as in the month of May; and continues his song, occasionally, to the middle or end of August. His usual note, when alarmed by an approach to his nest, is a sharp *chip*, like that of striking two hard pebbles smartly together.

Notwithstanding the beauty of his plumage, the vivacity with which he sings, and the ease with which he can be reared and kept, the Indigo-bird is seldom seen domesticated. The few I have met with were taken in trap-cages; and such of any species rarely sing equal to those which have been reared by hand from the nest. There is one singularity which, as it cannot be well represented in the figure, may be mentioned here, *viz.* that in some certain lights his plumage appears of a rich sky-blue, and in others of a vivid verdigris green; so that the same bird in passing from one place to another before your eyes, seems to undergo a total change of color. When the angle of incidence of the rays of light, reflected from his plumage, is acute, the color is green, when obtuse blue. Such I think I have observed to be uniformly the case, without being optician enough to explain why it is so. From this, however, must be excepted the color of the head, which being of a very deep blue, is not affected by a change of position.

The nest of this bird is usually built in a low bush, among rank grass, grain, or clover; suspended by two twigs, one passing up each side; and is composed outwardly of flax, and lined with fine dry grass. I have also known it to build in the hollow of an apple tree. The eggs, generally five, are blue, with a blotch of purple at the great end.

The Indigo-bird is five inches long, and seven inches in ex-

tent; the whole body is of a rich sky-blue, deepening on the head to an ultramarine, with a tinge of purple; the blue on the body, tail, and wings, varies in particular lights to a light green, or verdigris color, similar to that on the breast of a peacock; wings black, edged with light blue, and becoming brownish towards the tips; lesser coverts light blue; greater black, broadly skirted with the same blue; tail black, exteriorly edged with blue; bill black above, whitish below, somewhat larger in proportion than Finches of the same size usually are, but less than those of the genus *Emberiza*, with which Mr. Pennant has classed it, tho I think improperly, as the bird has much more of the form and manners of the genus *Fringilla*, where I must be permitted to place it; legs and feet blackish brown. The female is of a light flaxen color, with the wings dusky black, and the cheeks, breast and whole lower parts a clay color, with streaks of a darker color under the wings, and tinged in several places with bluish. Towards Fall the male while moulting becomes nearly of the color of the female, and in one which I kept thro the winter, the rich blue plumage did not return for more than two months; tho I doubt not had the bird enjoyed his liberty and natural food under a warm sun this brownness would have been of shorter duration. The usual food of this species is insects and various kinds of seeds.

AMERICAN REDSTART.

MUSCICAPA RUTICILLA.

[Plate VI.—Fig. 6.]

Muscicapa Ruticilla, LINN. *Syst.* I, 236, 10.—GMEL. *Syst.* I, 935.—*Motacilla flavicauda*, GMEL. *Syst.* I, 997. (*female*).—*Le Gobe-mouche d'Amerique*, BRISS. *Orn.* II, 383, 14. *Pl. enl.* 566, fig. 1, 2.—*Small American Redstart*, EDW. 80. *Id.* 257. (*female*).—*Yellow tailed Warbler*, ARCT. *Zool.* II, No. 301. *Id.* II, No. 282.—LATHAM *Syn.* IV, 427, 18.—*Arct. Zool.* II, No. 301. (*female*).—PEALE'S *Museum*, No. 6658.

THO this bird has been classed by several of our most respectable ornithologists among the warblers, yet in no species are the characteristics of the genus *Muscicapa* more decisively marked; and in fact it is one of the most expert Flycatchers of its tribe. It is almost perpetually in motion; and will pursue a retreating party of flies from the tops of the tallest trees, in an almost perpendicular, but zig-zag direction, to the ground, while the clicking of its bill is distinctly heard; and I doubt not but it often secures ten or twelve of these in a descent of three or four seconds. It then alights on an adjoining branch, traverses it lengthways for a few moments, flirting its expanded tail from side to side, and suddenly shoots off, in a direction quite unexpected, after fresh game, which it can discover at a great distance. Its notes, or twitter, tho animated and sprightly, are not deserving the name of song; sometimes they are *weèse, weèse, weèse*, repeated every quarter of a minute, as it skips among the branches; at other times this twitter varies to several other chants, which I can instantly distinguish in the woods, but cannot find words to imitate. The interior of the forest, the borders of swamps and meadows, deep glens covered with wood, and wherever flying insects abound there this little bird

is sure to be seen. It makes its appearance in Pennsylvania, from the south, late in April; and leaves us again about the beginning of September. It is very generally found over the whole United States; and has been taken at sea in the Fall on its way to St. Domingo,* and other of the West India islands, where it winters, along with many more of our summer visitants. It is also found in Jamaica, where it remains all winter.†

The name Redstart, evidently derived from the German *Rothstarts* (red tail), has been given this bird from its supposed resemblance to the Redstart of Europe (*Motacilla phoenicurus*); but besides being decisively of a different genus, it is very different both in size and in the tints and disposition of the colors of its plumage. Buffon goes even so far as to question whether the differences between the two be more than what might be naturally expected from change of climate. This eternal reference of every animal of the new world to that of the old, if adopted to the extent of this writer, with all the transmutations it is supposed to have produced, would leave us in doubt whether even the *Ka-te-dids*‡ of America were not originally Nightingales of the old world, degenerated by the inferiority of the food and climate of this upstart continent. We have in America many different species of birds that approach so near in resemblance to one another as not to be distinguished but by the eye of a naturalist, and on a close comparison; these live in the same climate, feed on the same food, and are, I doubt not, the same now, as they were five thousand years ago; and ten thousand years hence, if the species then exist, will be found marked with the same nice discriminations as at present. Is it, therefore surprising, that two different species, placed in different quarters of the world, should have certain near resemblances to one another without being bastards, or degenerated descendants, the

* Edwards.

† Sloane.

‡ A species of *Gryllus*, well known for its lively chatter during the evenings and nights of September and October.

one of the other, when the whole chain of created beings seem united to each other by such amazing gradations, that bespeak, not random chance and accidental degeneracy, but the magnificent design of an incomprehensibly wise and omnipotent Creator?

The American Redstart builds frequently in low bushes, in the fork of a small sapling, or on the drooping branches of the elm, within a few feet of the ground; outwardly it is formed of flax well wound together, and moistened with its saliva, interspersed here and there with pieces of lichen, and lined with a very soft downy substance. The female lays five white eggs, sprinkled with grey, and specks of blackish. The male is extremely anxious for its preservation; and on a person's approaching the place will flirt about within a few feet, seeming greatly distressed.

The length of this species is five inches, extent six and a quarter; the general color above is black, which covers the whole head and neck, and spreads on the upper part of the breast in a rounding form; where, as well as on the head and neck, it is glossed with steel blue; sides of the breast, below this black, the inside of the wings, and upper half of the wing-quills, are of a fine aurora color; but the greater and lesser coverts of the wings being black conceal this; and the orange, or aurora color, appears only as a broad transverse band across the wings; from thence to the tip they are brownish; the four middle feathers of the tail are black, the other eight of the same aurora color, and black towards the tips; belly and vent white, slightly streaked with pale orange; legs black; bill of the true muscicapa form, triangular at the base, beset with long bristles, and notched near the point; the female has not the rich aurora band across the wing; her back and crown is cinereous, inclining to olive; the white below is not so pure; lateral feathers of the tail and sides of the breast greenish yellow; middle tail feathers dusky brown. The young males of a year old are almost exactly like the female, differing in these particulars, that they have a yellow band across the wings which the female has not,

and the back is more tinged with brown; the lateral tail feathers are also yellow; middle ones brownish black; inside of the wings yellow. On the third season they receive their complete colors; and as males of the second year, in nearly the dress of the female, are often seen in the woods, having the same notes as the full plumaged male, it has given occasion to some people to assert, that the females sing as well as the males; and others have taken them for another species. The fact, however, is as I have stated it. This bird is too little known by people in general to have any provincial name.



1. Cedar Bird. 2. Redbellied Woodpecker. 3. Yellowthroated Flycatcher. 4. Purple Finch.

CEDAR-BIRD.

AMPELIS AMERICANA.

[Plate VII.—Fig. 1.]

Ampellis garrulus, LINN. *Syst.* I, 297, 1. β .—*Bombycilla Carolinensis*, BRISSON II, 337, 1. *Id.* 8vo. I, 251.—*Chatterer of Carolina*, CATESB. I, 46.—*Arct. Zool.* II, No. 207.—LATH. *Syn.* III, 93, 1. *A.*—EDW. 242.—COOK'S *Last Voyage*, II, 518.—ELLIS'S *Voyage*, II, 13.—PEALE'S *Museum*, No. 5608.

THE figure of the Cedar-bird which accompanies this description was drawn from a very beautiful specimen; and exhibits the form of its crest when erected, which gives it so gay and elegant an appearance. At pleasure it can lower and contract this so closely to its head and neck, as not to be observed. The plumage of these birds is of an exquisitely fine and silky texture, lying extremely smooth and glossy. Notwithstanding the name *Chatterers* given to them, they are perhaps the most silent species we have; making only a feeble, lisping sound, chiefly as they rise or alight. They fly in compact bodies, of from twenty to fifty; and usually alight so close together on the same tree, that one half are frequently shot down at a time. In the months of July and August, they collect together in flocks, and retire to the hilly parts of the state, the Blue mountains and other collateral ridges of the Alleghany, to enjoy the fruit of the *Vaccinium uliginosum*, whortleberries, which grow there in great abundance; whole mountains, for many miles, being almost entirely covered with them; and where in the month of August I have myself found the Cedar-birds numerous. In October they descend to the lower cultivated parts of the country, to feed on the berries of the sour gum, and red cedar, of which last they are immoderately fond; and thirty or forty may sometimes be seen fluttering among the branches of one small cedar tree, plucking off the berries. They are also found as

far south as Mexico, as appears from the accounts of Fernandez, Seba, and others.* Fernandez saw them near Tetzeuco, and calls them *Coquantotl*; says they delight to dwell in the mountainous parts of the country; and that their flesh and song are both indifferent.† Most of our epicures here, are, however, of a different opinion, as to their palatableness; for in the Fall, and beginning of summer, when they become very fat, they are in considerable esteem for the table; and great numbers are brought to the market of Philadelphia, where they are sold from twelve to twenty-five cents per dozen. During the whole winter and spring they are occasionally seen; and about the twenty-fifth of May appear in numerous parties, making great havock among the early cherries, selecting the best and ripest of the fruit. Nor are they easily intimidated by the presence of Mr. Scarecrow; for I have seen a flock deliberately feasting on the fruit of a loaded cherry tree, while on the same tree one of these *guardian angels*, and a very formidable one too, stretched his stiffened arms, and displayed his dangling legs, with all the pomposity of authority! At this time of the season most of our resident birds, and many of our summer visitants, are sitting, or have young; while even on the first of June, the eggs in the ovary of the female Cedar-bird are no larger than mustard seed; and it is generally the eighth or tenth of that month before they begin to build. These last are curious circumstances, which it is difficult to account for, unless by supposing, that incubation is retarded by a scarcity of suitable food in spring; berries and other fruit being their usual fare. In May before the cherries are ripe, they are lean, and little else is found in their stomachs than a few shrivelled cedar berries, the refuse of the former season, and a few fragments of beetles and other insects, which do not appear to be their common food; but in June, while cherries and strawberries

* The figure of this bird in Seba's voluminous work is too wretched for criticism; it is there called "Oiseau Xomotl, d'Amerique, huppée." Seb. II, p. 66, t. 65, fig. 5.

† Hist. Av. Nov. Hisp. 55.

abound they become extremely fat; and about the tenth or twelfth of that month, disperse over the country in pairs to breed; sometimes fixing on the cedar, but generally choosing the orchard for that purpose. The nest is large for the size of the bird, fixed in the forked or horizontal branch of an apple tree, ten or twelve feet from the ground; outwardly, and at bottom is laid a mass of coarse dry stalks of grass, and the inside is lined wholly with very fine stalks of the same material. The eggs are three or four, of a dingy bluish white, thick at the great end, tapering suddenly, and becoming very narrow at the other; marked with small roundish spots of black of various sizes and shades; and the great end is of a pale dull purple tinge, marked likewise with touches of various shades of purple and black. About the last week in June the young are hatched, and are at first fed on insects and their larvæ; but as they advance in growth, on berries of various kinds. These facts I have myself been an eye witness to. The female, if disturbed, darts from the nest in silence to a considerable distance; no notes of wailing or lamentation are heard from either parent, nor are they even seen, notwithstanding you are in the tree examining the nest and young. These nests are less frequently found than many others, owing, not only to the comparatively few numbers of the birds, but to the remarkable muteness of the species. The season of love, which makes almost every other small bird musical, has no such effect on them; for they continue at that interesting period as silent as before.

This species is also found in Canada, where it is called *Recollet*, probably, as Dr. Latham supposes, from the color and appearance of its crest resembling the hood of an order of friars of that denomination; it has also been met with by several of our voyagers on the north-west coast of America, and appears to have an extensive range.

Almost all the ornithologists of Europe persist in considering this bird as a variety of the European Chatterer (*A. garrulus*), with

what justice or propriety, a mere comparison of the two will determine. The European species is very nearly twice the cubic bulk of ours; has the whole lower parts of an uniform dark vinous bay; the tips of the wings streaked with lateral bars of yellow; the nostrils covered with bristles;* the feathers on the chin loose and tufted; the wings black; and the markings of white and black on the sides of the head different from the American, which is as follows:—Length seven inches, extent eleven inches; head, neck, breast, upper part of the back and wing-coverts, a dark fawn color; darkest on the back, and brightest on the front; head ornamented with a high pointed almost upright crest; line from the nostril over the eye to the hind head velvety black, bordered above with a fine line of white, and another line of white passes from the lower mandible; chin black, gradually brightening into fawn color, the feathers there lying extremely close; bill black, upper mandible nearly triangular at the base, without bristles, short, rounding at the point, where it is deeply notched; the lower scolloped at the tip and turning up; tongue as in the rest of the genus, broad, thin, cartilaginous, and lacerated at the end; belly yellow; vent white; wings deep slate, except the two secondaries next the body, whose exterior vanes are of a fawn color, and interior ones white; forming two whitish strips there, which are very conspicuous; rump and tail coverts pale light blue, tail the same, gradually deepening into black, and tipped for half an inch with rich yellow. Six or seven, and sometimes the whole nine, secondary feathers of the wings, are ornamented at the tips with small red oblong appendages, resembling red sealing-wax; these appear to be a prolongation of the shafts, and to be intended for preserving the ends, and consequently the vanes, of the quills from being broken and worn away, by the almost continual fluttering of the bird among thick branches of the cedar. The feathers of those birds which are without these appendages are uniformly found ragged on the edges; but smooth and

* Turton.

perfect in those on whom the marks are full and numerous. These singular marks have been usually considered as belonging to the male alone, from the circumstance, perhaps, of finding female birds without them. They are, however, common to both male and female. Six of the latter are now lying before me, each with large and numerous clusters of eggs, and having the waxen appendages in full perfection. The young birds do not receive them until the second Fall, when, in moulting time they may be seen fully formed, as the feather is developed from its sheath. I have once or twice found a solitary one on the extremity of one of the tail feathers. The eye is of a dark blood color; the legs and claws black; the inside of the mouth orange; gap wide; and the gullet capable of such distention as often to contain twelve or fifteen cedar berries, and serving as a kind of craw to prepare them for digestion. No wonder then that this gluttonous bird, with such a mass of food almost continually in its throat, should want both the inclination and powers for vocal melody, which would seem to belong to those only of less gross and voracious habits. The chief difference in the plumage of the male and female consists in the dullness of the tints of the latter, the inferior appearance of the crest, and the narrowness of the yellow bar on the tip of the tail.

Tho I do not flatter myself with being able to remove that prejudice from the minds of foreigners, which has made them look on this bird, also, as a degenerate and not a distinct species from their own; yet they must allow that the change has been very great, very uniform, and universal, all over North America, where I have never heard that the European species has been found; or even if it were, this would only shew more clearly the specific difference of the two, by proving, that climate or food could never have produced these differences in either when both retain them, tho confined to the same climate.

But it is not only in the color of their plumage that these two birds differ, but in several important particulars, in their manners

and habits. The breeding place of the European species is absolutely unknown; supposed to be somewhere about the polar regions; from whence, in winter, they make different and very irregular excursions to different parts of Europe; seldom advancing farther south than the north of England, in lat. 54° N. and so irregularly, that many years sometimes elapse between their departure and reappearance; which in more superstitious ages has been supposed to portend some great national calamity. On the other hand, the American species inhabits the whole extensive range between Mexico and Canada, and perhaps much farther both northerly and southerly, building and rearing their young in all the intermediate regions, often in our gardens and orchards, within a few yards of our houses. Those of our fellow-citizens who have still any doubts, and wish to examine for themselves, may see beautiful specimens of both birds in the superb collection of Mr. Charles W. Peale of this city, whose magnificent museum is indeed a national blessing, and will be a lasting honor to his memory.

In some parts of the country they are called Crown-birds; in others Cherry-birds, from their fondness for that fruit. They also feed on ripe persimmons, small winter grapes, bird-cherries and a great variety of other fruits and berries. The action of the stomach on these seeds and berries do not seem to injure their vegetative powers; but rather to promote them, by imbedding them in a calcareous case, and they are thus transported to and planted in various and distant parts by these little birds. In other respects, however, their usefulness to the farmer may be questioned; and in the general chorus of the feathered songsters they can scarcely be said to take a part. We must therefore rank them far below many more homely and minute warblers their neighbours, whom Providence seems to have formed, both as allies to protect the property of the husbandman from devouring insects, and as musicians to cheer him, while engaged in the labours of the field, with their innocent and delightful melody.

RED-BELLIED WOODPECKER.

PICUS CAROLINUS.

[Plate VII.—Fig. 2.]

Picus Carolinus, LINN. *Syst.* I, 174, 10.—*Pic varié de la Jamaïque*, BUFFON VII, 72. *Pl. enl.* 597.—*Picus varius medius Jamaicensis*, SLOAN. *Jam.* 299, 15.—*Jamaica Woodpecker*, EDW. 244.—CATESB. I, 19, *fig.* 2.—*Arct. Zool.* II, No. 161.—LATH. *Syn.* II, 570, 17. *Id.* 571, 17. *A. Id. B.*—*L'Epeiche rayé de la Louisiane*, BUFF. VII, 73. *Pl. enl.* 692.—PEALE'S *Museum*, No. 1944.

THIS species possesses all the restless and noisy habits so characteristic of its tribe. It is more shy and less domestic than the Red-headed one, (*P. erythrocephalus*,) or any of the other spotted Woodpeckers. It is also more solitary. It prefers the largest, high-timbered woods, and tallest decayed trees of the forest; seldom appearing near the ground, on the fences, or in orchards or open fields; yet where the trees have been deadened, and stand pretty thick, in fields of Indian corn, as is common in new settlements, I have observed it to be very numerous; and have found its stomach sometimes completely filled with that grain. Its voice is hoarser than any of the others; and its usual note *chow*, has often reminded me of the barking of a little lap-dog. It is a most expert climber, possessing extraordinary strength in the muscles of its feet and claws, and moves about the body and horizontal limbs of the trees, with equal facility in all directions. It rattles, like the rest of the tribe, on the dead limbs, and with such violence as to be heard, in still weather, more than half a mile off; and listens to hear the insects it has alarmed. In the lower side of some lofty branch that makes a considerable angle with the horizon, the male and female in conjunction dig out a circular cavity for their nest, sometimes out of the solid wood, but more generally into a hollow

limb, twelve or fifteen inches above where it becomes solid. This is usually performed early in April. The female lays five eggs of a pure white, or almost semi-transparent; and the young generally make their appearance towards the latter end of May, or beginning of June, climbing up to the higher parts of the tree, being as yet unable to fly. In this situation they are fed for several days, and often become the prey of the Hawks. From seeing the old ones continuing their caresses after this period, I believe that they often, and perhaps always, produce two brood in a season. During the greatest part of the summer the young have the ridge of the neck and head of a dull brownish ash; and a male of the third year has received his complete colors.

The Red-bellied Woodpecker is ten inches in length, and seventeen in extent; the bill is nearly an inch and a half in length, wedged at the point, but not quite so much grooved as some others, strong, and of a bluish black color; the nostrils are placed in one of these grooves, and covered with curving tufts of light brown hairs, ending in black points; the feathers on the front stand more erect than usual, and are of a dull yellowish red; from thence along the whole upper part of the head and neck down the back and spreading round to the shoulders is of the most brilliant golden glossy red; the whole cheeks, line over the eye, and under side of the neck, is a pale buff color, which on the breast and belly deepens into a yellowish ash, stained on the belly with a blood red; the vent and thigh feathers are dull white, marked down their centers with heart-formed and long arrow-pointed spots of black. The back is black, crossed with transverse curving lines of white; the wings are also black, the lesser wing-coverts circularly tipped and the whole primaries and secondaries beautifully crossed with bars of white, and also tipped with the same; the rump is white, interspersed with touches of black; the tail coverts white near their extremities; the tail consists of ten feathers, the two middle ones black, their interior webs or vanes white, crossed with diagonal spots of black;

these when the edges of the two feathers just touch, coincide, and form heart-shaped spots; a narrow sword-shaped line of white runs up the exterior side of the shafts of the same feathers; the next four feathers on each side are black, the outer edges of the exterior ones barred with black and white, which on the lower side seems to cross the whole vane as in the figure; the extremities of the whole tail, except the outer feather, are black, sometimes touched with yellowish or cream color; the legs and feet are of a bluish green, and the iris of the eye red. The tongue or *os hyoides* passes up over the hind head, and is attached by a very elastic retractile membrane to the base of the right nostril; the extremity of the tongue is long, horny, very pointed, and thickly edged with barbs, the other part of the tongue is worm-shaped. In several specimens I found the stomach nearly filled with pieces of a species of fungus, that grows on decayed wood, and in all with great numbers of insects, seeds, gravel, &c. &c. The female differs from the male in having the crown, for an inch, of a fine ash, and the black not so intense; the front is reddish as in the male, and the whole hind head down to the back, likewise of the same rich red as his. In the bird from which this latter description was taken, I found a large cluster of minute eggs, to the number of fifty, or upwards, in the beginning of the month of March.

This species inhabits a large extent of country, in all of which it seems to be resident, or nearly so. I found them abundant in Upper Canada, and in the northern parts of the state of New York, in the month of November; they also inhabit the whole Atlantic states as far as Georgia, and the southern extremity of Florida, as well as the interior parts of the United States as far west as Chillicothe in the state of Ohio, and, according to Buffon, Louisiana. They are said to be the only Woodpeckers found in Jamaica; tho I question whether this be correct; and to be extremely fond of the capsicum, or Indian pepper.* They are certainly much hardier

* Sloane.

birds, and capable of subsisting on coarser and more various fare, and of sustaining a greater degree of cold, than several other of our Woodpeckers. They are active and vigorous; and being almost continually in search of insects that injure our forest trees, do not seem to deserve the injurious epithets that almost all writers have given them. It is true they frequently perforate the timber in pursuit of these vermin, but this is almost always in dead and decaying parts of the tree, which are the nests and nurseries of millions of destructive insects. Considering matters in this light I do not think their services overpaid by all the ears of Indian corn they consume; and would protect them within my own premises as being more useful than injurious.

YELLOW-THROATED FLYCATCHER.

MUSCICAPA SYLVICOLA.

[Plate VII.—Fig. 3.]

PEALE'S *Museum*, No. 6827.

THIS summer species is found chiefly in the woods, hunting among the high branches; and has an indolent and plaintive note, which it repeats with some little variation, every ten or twelve seconds, like *preeò—preeà*, &c. It is often heard in company with the Red-eyed Flycatcher (*Muscicapa olivacea*), or Whip-Tom-Kelly of Jamaica; the loud energetic notes of the latter, mingling with the soft languid warble of the former, producing an agreeable effect, particularly during the burning heat of noon, when almost every other songster but these two is silent. Those who loiter thro the shades of our magnificent forests at that hour, will easily recognise both species. It arrives from the south early in May; and returns again with its young about the middle of September. Its nest, which is sometimes fixed on the upper side of a limb, sometimes on a horizontal branch among the twigs, generally on a tree, is composed outwardly of thin strips of the bark of grape-vines, moss, lichens, &c. and lined with fine fibres of such like substances; the eggs, usually four, are white, thinly dotted with black, chiefly near the great end. Winged insects are its principal food.

Whether this species has been described before or not I must leave to the sagacity of the reader, who has the opportunity of examining European works of this kind, to discover.* I have met with

* See "Orange-throated Warbler," Lath. Syn. II, 481, 103.

no description in Pennant, Buffon, or Latham, that will properly apply to this bird, which may perhaps be owing to the imperfection of the account, rather than ignorance of the species, which is by no means rare.

The Yellow-throated Flycatcher is five inches and a half long, and nine inches from tip to tip of the expanded wings; the upper part of the head, sides of the neck, and the back, are of a fine yellow olive; throat, breast and line over the eye, which it nearly encircles, a delicate lemon yellow, which in a lighter tinge lines the wings; belly and vent pure silky white; lesser wing coverts, lower part of the back, and rump, ash; wings deep brown, almost black, crossed with two white bars; primaries edged with light ash, secondaries with white; tail a little forked, of the same brownish black with the wings, the three exterior feathers edged on each vane with white; legs and claws light blue; the two exterior toes united to the middle one as far as the second joint; bill broad at the base, with three or four slight bristles, the upper mandible overhanging the lower at the point, near which it is deeply notched; tongue thin, broad, tapering near the end, and bifid; the eye is of a dark hazel; and the whole bill of a dusky light blue. The female differs very little in color from the male; the yellow on the breast and round the eye is duller, and the white on the wings less pure.

PURPLE FINCH.

FRINGILLA PURPUREA.

[Plate VII.—Fig. 4]

Fringilla purpurea, GMEL. *Syst.* I, 923.—*Bouvreuil violet de la Caroline*, BUFF. IV, 395.—*Purple Finch*, *Arct. Zool.* II, No. 258.—CATESB. I, 41.—LATH. *Syn.* III, 275, 39.—*Crimson-headed Finch*, *Arct. Zool.* II, No. 257.—LATH. *Syn.* III, 271, 29.—GMEL. *Syst.* I, 864.—*Fringilla rosea*, PALLAS III, 699, 26.—*Hemp-bird*, BARTRAM, 291. *Fringilla purpurea*, *Id.* 291.—PEALE'S *Museum*, No. 6504.

THIS is a winter bird of passage, coming to us in large flocks from the north, in September and October; great numbers remaining with us in Pennsylvania during the whole winter, feeding on the seeds of the poplar, button-wood, juniper, cedar; and on those of many rank weeds that flourish in rich bottoms, and along the margin of creeks. When the season is very severe they proceed to the south, as far at least as Georgia, returning north early in April. They now frequent the elm trees, feeding on the slender but sweet covering of the flowers; and as soon as the cherries put out their blossoms, feed almost exclusively on the stamina of the flowers; afterwards the apple blossoms are attacked in the same manner; and their depredations on these continue till they disappear, which is usually about the tenth or middle of May. I have been told that they sometimes breed in the northern parts of New York, but have never met with their nests. About the middle of September I found these birds numerous on Long Island, and round Newark in New Jersey. They fly at a considerable height in the air, and their note is a single *chink* like that of the Rice-bird. They possess great boldness and spirit, and when caught bite violently, and hang by the bill from your hand, striking with great fury; but they are soon reconciled to confinement, and in a day or

two are quite at home. I have kept a pair of these birds upwards of nine months to observe their manners. One was caught in a trap, the other was winged with the gun; both are now as familiar as if brought up from the nest by the hand, and seem to prefer hemp-seed and cherry blossoms to all other kinds of food. Both male and female, tho not crested, are almost constantly in the habit of erecting the feathers of the crown; they appear to be of a tyrannical and domineering disposition, for they nearly killed an Indigo-bird and two or three others that were occasionally placed with them, driving them into a corner of the cage, standing on them and tearing out their feathers, striking them on the head, munching their wings, &c. &c. till I was obliged to interfere; and even if called to, the aggressor would only turn up a malicious eye to me for a moment, and renew his outrage as before. They are a hardy vigorous bird. In the month of October, about the time of their first arrival, I shot a male, rich in plumage, and plump in flesh, but which wanted one leg, that had been taken off a little above the knee; the wound had healed so completely, and was covered with so thick a skin, that it seemed as tho it had been so for years. Whether this mutilation was occasioned by a shot, or in party quarrels of its own, I could not determine; but our invalid seemed to have used his stump either in hopping or resting, for it had all the appearance of having been brought in frequent contact with other bodies harder than itself.

This bird is a striking example of the truth of what I have frequently repeated in this work, that in many instances the same bird has been more than once described by the same person as a different species; for it is a fact which time will establish, that the Crimson-headed Finch of Pennant and Latham, the Purple Finch of the same and other naturalists, the Hemp-bird of Bartram, and the *Fringilla Rosea* of Pallas, are one and the same, *viz.* the Purple Finch, the subject of the present article.

The Purple Finch is six inches in length, and nine in extent; head, neck, back, breast, rump and tail coverts dark crimson,

deepest on the head and chin, and lightest on the lower part of the breast; the back is streaked with dusky; the wings and tail are also dusky black, edged with reddish; the latter a good deal forked; round the base of the bill the recumbent feathers are of a light clay or cream color; belly and vent white; sides under the wings streaked with dull reddish; legs a dirty purplish flesh color; bill short, strong, conical, and of a dusky horn color; iris dark hazel; the feathers covering the ears are more dusky red than the other parts of the head. This is the male when arrived at his full colors. The female is nearly of the same size, of a brown olive or flaxen color, streaked with dusky black; the head seamed with lateral lines of whitish; above and below the hind part of the ear feathers are two streaks of white; the breast is whitish, streaked with a light flax color; tail and wings as in the male, only both edged with dull brown instead of red; belly and vent white. This is also the color of the young during the first, and to at least the end of the second, season, when the males begin to become lighter yellowish, which gradually brightens to crimson; the female always retains nearly the same appearance. The young male bird of the first year may be distinguished from the female by the tail of the former being edged with olive green, that of the latter with brown. A male of one of these birds which I kept for some time, changed in the month of October from red to greenish yellow, but died before it recovered its former color.

BROWN CREEPER.

CERTHIA FAMILIARIS.

[Plate VIII.—Fig. 1.]

Little Brown variegated Creeper, BARTRAM, 289.—PEALE'S *Museum*, No. 2434.

THIS bird agrees so nearly with the common European creeper (*Certhia familiaris*), that I have little doubt of their being one and the same species. I have examined, at different times, great numbers of these birds, and have endeavoured to make a correct drawing of the male, that Europeans and others may judge for themselves; and the excellent artist to whom the plate was entrusted has done his part so well in the engraving, as to render the figure a perfect resemblance of the living original.

The Brown Creeper is an extremely active and restless little bird. In winter it associates with the small spotted Woodpecker, Nuthatch, Titmouse, &c. and often follows in their rear, gleaning up those insects which their more powerful bills had alarmed and exposed; for its own slender incurvated bill seems unequal to the task of penetrating into even the decayed wood; tho it may into holes and behind scales of the bark. Of the Titmouse there are generally present the individuals of a whole family, and seldom more than one or two of the others. As the party advances thro the woods, from tree to tree, our little gleaner seems to observe a good deal of regularity in his proceedings; for I have almost always observed that he alights on the body near the root of the tree, and directs his course with great nimbleness upwards to the higher branches, sometimes spirally, often in a direct line, moving rapidly and uniformly along with his tail bent to the tree, and not in the



1. Brown Creeper. 2. Golden-crowned Wren. 3. House Wren. 4. Black-cap Titmouse. 5. Crested Titmouse. 6. Winter Wren.

Drawn from nature by A. Wilson.

Engraved by A. Lawson.

hopping manner of the Woodpecker, whom he far surpasses in dexterity of climbing, running along the lower side of the horizontal branches with surprising ease. If any person be near when he alights he is sure to keep the opposite side of the tree, moving round as he moves, so as to prevent him from getting more than a transient glimpse of him. The best method of outwitting him, if you are alone, is, as soon as he alights and disappears behind the trunk, take your stand behind an adjoining one, and keep a sharp look out twenty or thirty feet up the body of the tree he is upon, for he generally mounts very regularly to a considerable height, examining the whole way as he advances. In a minute or two, hearing all still, he will make his appearance on one side or other of the tree, and give you an opportunity of observing him.

These birds are distributed over the whole United States; but are most numerous in the western and northern states, and particularly so in the depth of the forests, and in tracts of large timbered woods, where they usually breed; visiting the thicker settled parts of the country in Fall and winter. They are more abundant in the flat woods of the lower district of New Jersey than in Pennsylvania; and are frequently found among the pines. Tho their customary food appears to consist of those insects of the coleopterous class, yet I have frequently found in their stomachs the seeds of the pine tree, and fragments of a species of fungus that vegetates in old wood, with generally a large proportion of gravel. There seems to be scarcely any difference between the colors and markings of the male and female. In the month of March I opened eleven of these birds, among whom were several females, as appeared by the clusters of minute eggs with which their ovaries were filled, and also several well marked males, and on the most careful comparison of their plumage I could find little or no difference; the colors indeed were rather more vivid and intense in some than in others; but sometimes this superiority belonged to a male, sometimes to a female, and appeared to be entirely owing to difference

in age. I found, however, a remarkable and very striking difference in their sizes; some were considerably larger, and had the bill at least one third longer and stronger than the others, and these I uniformly found to be males. I also received two of these birds from the country bordering on the Cayuga lake, in New York state, from a person who killed them from the tree in which they had their nest. The male of this pair had the bill of the same extraordinary size with several others I had examined before, the plumage in every respect the same. Other males indeed, were found at the same time of the usual size. Whether this be only an accidental variety, or whether the male when full grown be naturally so much larger than the female (as is the case with many birds), and takes several years in arriving at his full size, I cannot positively determine, tho I think the latter most probable.

The Brown Creeper builds his nest in the hollow trunk or branch of a tree, where the tree has been shivered, or a limb broken off, or where squirrels or Woodpeckers have wrought out an entrance, for nature has not provided him with the means of excavating one for himself. I have known the female begin to lay by the seventeenth of April. The eggs are usually seven, of a dull cinereous, marked with small dots of reddish yellow, and streaks of dark brown. The young come forth with great caution, creeping about long before they venture on wing. From the early season at which they begin to build, I have no doubts of their raising two broods during summer, as I have seen the old ones entering holes late in July.

The length of this bird is five inches, and nearly seven from the extremity of one wing to that of the other; the upper part of the head is of a deep brownish black; the back brown, and both streaked with white, the plumage of the latter being of a loose texture with its filaments not adhering; the white is in the center of every feather, and is skirted with brown; lower part of the back, rump and tail-coverts rusty brown, the last minutely tipped with

whitish; the tail is as long as the body, of a light drab color, with the inner webs dusky, and consists of twelve quills, each sloping off and tapering to a point in the manner of the Woodpeckers, but proportionably weaker in the shafts; in many specimens the tail was very slightly marked with transverse undulating waves of dusky, scarce observable; the two middle feathers the longest, the others on each side shortening by one sixth of an inch to the outer one; the wing consists of nineteen feathers, the first an inch long, the fourth and fifth the longest, of a deep brownish black, and crossed about its middle with a curving band of rufous white, a quarter of an inch in breadth, marking ten of the quills; below this the quills are exteriorly edged to within a little of their tips with rufous white, and tipped with white; the three secondaries next the body are dusky white on their inner webs, tipped on the exterior margin with white, and above that alternately streaked laterally with black and dull white; the greater and lesser wing coverts are exteriorly tipped with white, the upper part of the exterior edges of the former rufous white; the line over the eye and whole lower parts are white, a little brownish toward the vent, but on the chin and throat pure, silky and glistening; the white curves inwards about the middle of the neck; the bill is half an inch long, slender, compressed sideways, bending downwards, tapering to a point, dusky above and white below; the nostrils are oblong, half covered with a convex membrane, and without hairs or small feathers; the inside of the mouth is reddish; the tongue tapering gradually to a point, and horny towards the tip; the eye is dark hazel; the legs and feet a dirty clay color; the toes placed three before and one behind, the two outer ones connected with the middle one to the first joint; the claws rather paler, large, almost semi-circular, and extremely sharp pointed; the hind claw the largest. The figure in the plate represents a male of the usual size in its exact proportions, and, but for the satisfaction of foreigners, might have rendered the whole of this prolix description unnecessary.

GOLDEN-CRESTED WREN.

SYLVIA REGULUS.

[Plate VIII.—Fig. 2.]

Motacilla regulus, LINN. *Syst.* I, 338, 48.—LATH. *Syn.* IV, 508, 145.—EDW. 254.—
PEALE'S *Museum*, No. 7246.

THIS diminutive species is a frequent associate of the one last described, and seems to be almost a citizen of the world at large, having been found not only in North and South America, the West Indies and Europe, but even in Africa and India. The specimen from Europe, in Mr. Peale's collection, appears to be in nothing specifically different from the American; and the very accurate description given of this bird by the count de Buffon agrees in every respect with ours. Here, as in Europe, it is a bird of passage, making its first appearance in Pennsylvania early in April, among the blossoms of the maple, often accompanied by the Ruby-crowned Wren, which, except in the markings of the head, it very much resembles. It is very frequent among evergreens, such as the pine, spruce, cedar, juniper, &c. and in the Fall is generally found in company with the two species of Titmouse, Brown Creeper, and small spotted Woodpecker. It is an active, unsuspicious and diligent little creature, climbing and hanging, occasionally, among the branches, and sometimes even on the body of the tree, in search of the larvæ of insects attached to the leaves and stems, and various kinds of small flies, which it frequently seizes on wing. As it retires still farther north to breed, it is seldom seen in Pennsylvania from May to October; but is then numerous in orchards, feeding among the leaves of the apple trees, which at that season are infested with vast numbers of small black winged insects. Its chirp

is feeble, not much louder than that of a mouse; tho where it breeds the male is said to have a variety of sprightly notes. It builds its nest frequently on the branches of an evergreen, covers it entirely round, leaving a small hole on one side for entrance, forming it outwardly of moss and lichens, and lining it warmly with down. The female lays six or eight eggs, pure white, with a few minute specks of dull red. Dr. Latham, on whose authority this is given, observes, "it seems to frequent the oak trees in preference to all others. I have more than once seen a brood of these in a large oak in the middle of a lawn, the whole little family of which, as soon as able, were in perpetual motion, and gave great pleasure to many who viewed them. The nest of one of these has also been made in a garden on a fir tree; it was composed of moss, the opening on one side, in shape roundish; it was lined with a downy substance, fixed with small filaments. It is said to sing very melodiously, very like the Common Wren, but weaker."* In Pennsylvania they continue with us from October to December, and sometimes to January.

The Golden-crested Wren is four inches long, and six inches and a half in extent; back a fine yellow olive; hind head and sides of the neck inclining to ash; a line of white passes round the frontlet extending over and beyond the eye on each side; above this another line or strip of deep black passes in the same manner, extending farther behind; between these two strips of black lies a bed of glossy golden yellow, which being parted a little, exposes another of a bright flame color, extending over the whole upper part of the head; when the little warbler flits among the branches in pursuit of insects, he opens and shuts this golden ornament with great adroitness, which produces a striking and elegant effect; lores marked with circular points of black; below the eye is a rounding spot of dull white; from the upper mandible to the bottom of the

* Synopsis II, 509.

ear feathers runs a line of black, accompanied by another of white from the lower mandible; breast light cream color; sides under the wings and vent the same; wings dusky, edged exteriorly with yellow olive; greater wing coverts tipped with white, immediately below which a spot of black extends over several of the secondaries; tail pretty long, forked, dusky, exterior vanes broadly edged with yellow olive; legs brown, feet and claws yellow; bill black, slender, straight, evidently of the muscicapa form, the upper mandible being notched at the point, and furnished at the base with bristles, that reach half way to its point; but what seems singular and peculiar to this little bird, the nostril on each side is covered by a single feather, that much resembles the antennæ of some butterflies, and is half the length of the bill. Buffon has taken notice of the same in the European. Inside of the mouth a reddish orange; claws extremely sharp, the hind one the longest. In the female the tints and markings are nearly the same, only the crown or crest is pale yellow. These birds are numerous in Pennsylvania in the month of October, frequenting bushes that overhang streams of water, alders, briars, and particularly apple trees, where they are eminently useful in destroying great numbers of insects, and are at that season extremely fat.

HOUSE WREN.

[Plate VIII.—Fig. 3.]

Motacilla domestica (Regulus rufus), BARTRAM, 291.—PEALE'S *Museum*, No. 7283.

THIS well known and familiar bird arrives in Pennsylvania about the middle of April; and about the eighth or tenth of May, begins to build its nest, sometimes in the wooden cornice under the eaves, or in a hollow cherry tree; but most commonly in small boxes, fixed on the top of a pole, in or near the garden, to which he is extremely partial, for the great number of caterpillars and other larvæ with which it constantly supplies him. If all these conveniences are wanting, he will even put up with an old hat, nailed on the weather boards, with a small hole for entrance; and if even this be denied him, he will find some hole, corner or crevice about the house, barn or stable, rather than abandon the dwellings of man. In the month of June, a mower hung up his coat, under a shed, near the barn; two or three days elapsed before he had occasion to put it on again; thrusting his arm up the sleeve he found it completely filled with some rubbish, as he expressed it, and, on extracting the whole mass, found it to be the nest of a Wren completely finished, and lined with a large quantity of feathers. In his retreat he was followed by the little forlorn proprietors, who scolded him with great vehemence for thus ruining the whole economy of their household affairs. The twigs with which the outward parts of the nest are constructed are short and crooked that they may the better hook in with one another, and the hole or entrance is so much shut up to prevent the intrusion of snakes or cats, that it appears almost impossible the body of the bird could be admitted; within this is a layer of fine dried stalks of grass, and lastly

feathers. The eggs are six or seven, and sometimes nine, of a red purplish flesh-color, innumerable fine grains of that tint being thickly sprinkled over the whole egg. They generally raise two brood in a season; the first about the beginning of June, the second in July.

This little bird has a strong antipathy to cats; for having frequent occasion to glean among the currant bushes, and other shrubbery in the garden, those lurking enemies of the feathered race often prove fatal to him. A box fixed up in the window of the room where I slept, was taken possession of by a pair of Wrens. Already the nest was built, and two eggs laid, when one day the window being open, as well as the room door, the female Wren venturing too far into the room to reconnoitre, was sprung upon by grimalkin, who had planted herself there for the purpose; and before relief could be given was destroyed. Curious to see how the survivor would demean himself, I watched him carefully for several days. At first he sung with great vivacity for an hour or so, but becoming uneasy, went off for half an hour; on his return he chanted again as before, went to the top of the house, stable, and weeping willow, that she might hear him; but seeing no appearance of her, he returned once more, visited the nest, ventured cautiously into the window, gazed about with suspicious looks, his voice sinking to a low melancholy note as he stretched his little neck about in every direction. Returning to the box he seemed for some minutes at a loss what to do, and soon after went off, as I thought, altogether, for I saw him no more that day. Towards the afternoon of the second day, he again made his appearance, accompanied with a new female, who seemed exceedingly timorous and shy; and who after great hesitation entered the box; at this moment the little widower or bridegroom, seemed as if he would warble out his very life with ecstasy of joy. After remaining about half a minute in, they both flew off, but returned in a few minutes and instantly began to carry out the eggs, feathers, and some of the

sticks, supplying the place of the two latter with materials of the same sort; and ultimately succeeded in raising a brood of seven young, all of which escaped in safety.

The immense number of insects which this sociable little bird removes from the garden and fruit trees, ought to endear him to every cultivator, even if he had nothing else to recommend him; but his notes, loud, sprightly, tremulous, and repeated every few seconds with great animation, are extremely agreeable. In the heat of summer, families in the country often dine under the piazza, adjoining green canopies of mantling grape vines, gourds, &c. while overhead the trilling vivacity of the Wren, mingled with the warbling mimicry of the Mocking-bird, and the distant softened sounds of numerous other songsters that we shall hereafter introduce to the reader's acquaintance, form a soul-soothing and almost heavenly music, breathing peace, innocence and rural repose. The European who judges of the song of this species by that of his own Wren (*M. troglodytes*), will do injustice to the former, as in strength of tone, and execution, it is far superior, as well as the bird is in size, figure and elegance of markings, to the European one. Its manners are also different; its sociability greater. It is no *underground* inhabitant; its nest is differently constructed, the number of its eggs fewer; it is also migratory; and has the tail and bill much longer. Its food is insects and caterpillars, and while supplying the wants of its young it destroys, on a moderate calculation many hundreds a day, and greatly circumscribes the ravages of these vermin. It is a bold and insolent bird against those of the Titmouse or Woodpecker kind that venture to build within its jurisdiction; attacking them without hesitation, tho twice its size, and generally forcing them to decamp. I have known him drive a pair of swallows from their newly formed nest, and take immediate possession of the premises, in which his female also laid her eggs and reared her young. Even the Blue-bird who claims an equal, and sort of hereditary right to the box in the garden, when attacked

by this little impertinent soon relinquishes the contest, the mild placidness of his disposition not being a match for the fiery impetuosity of his little antagonist. With those of his own species, who settle and build near him, he has frequent squabbles; and when their respective females are sitting, each strains his whole powers of song to excel the other. When the young are hatched the hurry and press of business leave no time for disputing, so true it is that idleness is the mother of mischief. These birds are not confined to the country; they are to be heard on the tops of the houses in the most central parts of our cities, singing with great energy. Scarce a house or cottage in the country is without at least a pair of them, and sometimes two; but unless where there is a large garden, orchard, and numerous outhouses, it is not often the case that more than one pair reside near the same spot, owing to their party disputes and jealousies. It has been said by a friend to this little bird, that "the esculent vegetables of a whole garden may, perhaps, be preserved from the depredations of different species of insects, by *ten* or *fifteen pair* of these small birds,"* and probably they might, were the combination practicable; but such a congregation of Wrens, about one garden is a phenomenon not to be expected but from a total change in the very nature and disposition of the species.

Having seen no accurate description of this bird in any European publication, I have confined my references to Mr. Bartram and Mr. Peale; but tho Europeans are not ignorant of the existence of this bird, they have considered it, as usual, merely as a slight variation from the original stock (*M. troglodytes*), their own Wren; in which they are, as usual, mistaken; the length and bent form of the bill, its notes, migratory habits, long tail, and red eggs, are sufficient specific differences.

The House Wren inhabits the whole of the United States, in all of which it is migratory. It leaves Pennsylvania in September;

* Barton's Fragments, Part I, p. 22.

I have sometimes, tho rarely, seen it in the beginning of October. It is four inches and a half long, and five and three quarters in extent, the whole upper parts of a deep brown, transversely crossed with black, except the head and neck, which is plain; throat, breast and cheeks light clay color; belly and vent mottled with black, brown and white; tail long, cuneiform, crossed with black; legs and feet light clay-colored; bill black, long, slightly curved, sharp pointed, and resembling that of the genus *Certhia*, considerably; the whole plumage below the surface is bluish ash; that on the rump having large round spots of white, not perceivable unless separated with the hand. The female differs very little in plumage from the male.

BLACK-CAPT TITMOUSE.

PARUS ATRICAPILLUS.

[Plate VIII.—Fig. 4.]

Parus atricapillus, LINN. *Syst.* I, 341, 6.—GMEL. *Syst.* I, 1008.—*La Mésange à tête noire de Canada*, BUFFON V, 408.—*Canada Titmouse*, *Arct. Zool.* II, No. 328.—LATH. *Syn.* IV, 542, 9.—PEALE'S *Museum*, No. 7380.

THIS is one of our resident birds, active, noisy and restless, hardly beyond any of his size, braving the severest cold of our continent as far north as the country round Hudson's bay, and always appearing most lively in the coldest weather. The males have a variety of very sprightly notes, which cannot indeed be called a song, but rather a lively, frequently repeated, and often varied twitter. They are most usually seen during the Fall and winter, when they leave the depths of the woods, and approach nearer to the scenes of cultivation. At such seasons they abound among evergreens, feeding on the seeds of the pine tree; they are also fond of sun-flower seeds, and associate in parties of six, eight or more, attended by the two species of Nuthatch already described, the Crested Titmouse, Brown Creeper, and small Spotted Woodpecker; the whole forming a very nimble and restless company, whose food, manners and dispositions are pretty much alike. About the middle of April they begin to build, choosing the deserted hole of a squirrel or Woodpecker, and sometimes with incredible labour digging out one for themselves. The female lays six white eggs, marked with minute specks of red; the first brood appear about the beginning of June, and the second towards the end of July; the whole of the family continue to associate together during winter. They traverse the woods in regular progression from tree to

tree, tumbling, chattering and hanging from the extremities of the branches, examining about the roots of the leaves, buds, and crevices of the bark for insects and their larvæ. They also frequently visit the orchards, particularly in Fall, the sides of the barn and barn-yard in the same pursuit, trees in such situations being generally much infested with insects. We therefore with pleasure rank this little bird among the farmer's friends, and trust our rural citizens will always recognize him as such.

This species has a very extensive range; it has been found on the western coast of America as far north as lat. 62°; it is common at Hudson's bay, and most plentiful there during winter, as it then approaches the settlements in quest of food. Protected by a remarkably thick covering of long soft downy plumage, it braves the severest cold of those northern regions.

The Black-capt Titmouse is five inches and a half in length, and six and a half in extent; throat and whole upper part of the head and ridge of the neck black; between these lies a triangular patch of white ending at the nostril; bill black and short, tongue truncate; rest of the upper parts lead colored or cinereous, slightly tinged with brown, wings edged with white; breast, belly and vent yellowish white; legs light blue; eyes dark hazel. The male and female are nearly alike. The figure in the plate renders any further description unnecessary.

The upper parts of the head of the young are for some time of a dirty brownish tinge; and in this state they agree so exactly with the *Parus Hudsonicus*,* described by Latham, as to afford good grounds for suspecting them to be the same.

These birds sometimes fight violently with each other, and are known to attack young and sickly birds that are incapable of resistance, always directing their blows against the scull. Being in the woods one day, I followed a bird for some time, the singu-

* Hudson Bay Titmouse, Synopsis II, 557.

larity of whose notes surprised me. Having shot him from off the top of a very tall tree, I found it to be the Black-headed Titmouse, with a long and deep indentation in the cranium, the skull having been evidently at some former time drove in, and fractured, but was now perfectly healed. Whether or not the change of voice could be owing to this circumstance I cannot pretend to decide.

CRESTED TITMOUSE.

PARUS BICOLOR.

[Plate VIII.—Fig. 5.]

Parus bicolor, LINN. *Syst.* I, 544, 1.—*La Mésange huppée de la Caroline*, BUFF. V, 451.—*Toupet Titmouse*, *Arct. Zool.* I, No. 324.—LATH. *Syn.* IV, 544, 11.—PEALE'S *Museum*, No. 7364.

THIS is another associate of the preceding species; but more noisy, more musical, and more suspicious, tho rather less active. It is, nevertheless, a sprightly bird, possessing a remarkable variety in the tones of its voice, at one time not much louder than the squeaking of a mouse, and in a moment after whistling aloud, and clearly, as if calling a dog; and continuing this dog-call thro the woods for half an hour at a time. Its high, pointed crest, or as Pennant calls it, *toupet*, gives it a smart and not inelegant appearance. Its food corresponds with that of the foregoing; it possesses considerable strength in the muscles of its neck, and is almost perpetually digging into acorns, nuts, crevices and rotten parts of the bark, after the larvæ of insects. It is also a constant resident here. When shot at and wounded, it fights with great spirit. When confined to a cage it soon becomes familiar, and will subsist on hemp-seed, cherry-stones, apple seeds, and hickory nuts, broken and thrown in to it. However, if the cage be made of willows, and the bird not much hurt, he will soon make his way thro them. The great concavity of the lower side of the wings and tail of this genus of birds is a strong characteristic, and well suited to their short irregular flight.

This species is also found over the whole United States; but is most numerous towards the north. It extends also to Hudson's

bay; and, according to Latham, is found in Denmark, and in the southern parts of Greenland, where it is called *Avingarsak*. If so, it probably inhabits the continent of North America from sea to sea.

The Crested Titmouse is six inches long, and seven inches and a half in extent; the whole upper parts a dull cinereous, or lead color, except the front which is black, tinged with reddish; whole lower parts dirty white, except the sides under the wings, which are reddish orange; legs and feet light blue; bill black, short and pretty strong; wing feathers relieved with dusky on their inner vanes; eye dark hazel; lores white; the head elegantly ornamented with a high, pointed, almost upright crest; tail a little forked, considerably concave below, and of the same color above as the back; tips of the wings dusky; tongue very short, truncate, and ending in three or four sharp points. The female cannot be distinguished from the male by her plumage, unless in its being something duller, for both are equally marked with reddish orange on the sides under the wings, which some foreigners have made the distinguishing mark of the male alone.

The nest is built in a hollow tree, the cavity often dug by itself; the female begins to lay early in May; the eggs are usually six, pure white, with a few very small specks of red near the great end. The whole family, in the month of July, hunt together, the parents keeping up a continual chatter, as if haranguing and directing their inexperienced brood.

WINTER WREN.

SYLVIA TROGLODYTES?

[Plate VIII.—Fig. 6.]

Motacilla troglodytes? LINN.—PEALE'S *Museum*, No. 7284.

THIS little stranger visits us from the north in the month of October, sometimes remaining with us all the winter, and is always observed early in spring on his route back to his breeding place. In size, color, song and manners he approaches nearer to the European Wren (*M. troglodytes*), than any other species we have. During his residence here he frequents the projecting banks of creeks, old roots, decayed logs, small bushes and rushes near watery places; he even approaches the farm-house, rambles about the wood-pile, creeping among the interstices like a mouse. With tail erect, which is his constant habit, mounted on some projecting point or pinnacle, he sings with great animation. Even in the yards, gardens and outhouses of the city, he appears familiar, and quite at home. In short, he possesses almost all the habits of the European species. He is, however, migratory, which may be owing to the superior coldness of our continent. Never having met with the nest and eggs, I am unable to say how nearly they approximate to those of the former.

I can find no precise description of this bird, as an American species, in any European publication. Even some of our own naturalists seem to have confounded it with another very different bird, the *Marsh Wren*,* which arrives in Pennsylvania from the

* See Professor Barton's observations on this subject, under the article *Motacilla Troglodytes?* "Fragments," &c. p. 18. Ibid. p. 12.

south in May, builds a globular or pitcher-shaped nest, which it suspends among the rushes and bushes by the river side, lays five or six eggs of a dark fawn color, and departs again in September. But the colors and markings of that bird are very unlike those of the Winter Wren, and its song altogether different. The circumstance of the one arriving from the north as the other returns to the south, and *vice versa*, with some general resemblance between the two, may have occasioned this mistake. They, however, not only breed in different regions, but belong to different genera, the Marsh Wren being decisively a species of *Certhia*, and the Winter Wren a true *Motacilla*. Indeed we have no less than five species of these birds in Pennsylvania, that by a superficial observer would be taken for one and the same; but between each of which nature has drawn strong, discriminating and indelible lines of separation. These will be pointed out in their proper places.

If this bird, as some suppose, retires only to the upper regions of the country, and mountainous forests, to breed, as is the case with some others, it will account for his early and frequent residence along the Atlantic coast during the severest winters; tho I rather suspect that he proceeds considerably to the northward; as the Snow-bird, which arrives about the same time with the Winter Wren, does not breed, it is said, even at Hudson's bay; but passes that settlement, in June, on its way to the northward; how much farther is unknown.

The length of the Winter Wren is three inches and a half, breadth five inches; the upper parts are of a general dark brown, crossed with transverse touches of black, except the upper parts of the head and neck, which are plain; the black spots on the back terminate in minute points of dull white; the first row of wing-coverts is also marked with specks of white at the extremities of the black, and tipped minutely with black; the next row is tipped with points of white; the primaries are crossed with alternate rows of black and cream color; inner vanes of all the quills dusky, except

the three secondaries next the body; tips of the wings dusky; throat, line over the eye, sides of the neck, ear feathers and breast, dirty white, with minute transverse touches of a drab or clay color; sides under the wings speckled with dark brown, black, and dirty white; belly and vent thickly mottled with sooty black, deep brown, and pure white, in transverse touches; tail very short, consisting of twelve feathers, the exterior one on each side a quarter of an inch shorter, the rest lengthening gradually to the middle ones; legs and feet a light clay color, and pretty stout; bill straight, slender, half an inch long, not notched at the point, of a dark brown or black above, and whitish below; nostril oblong; eye light hazel. The female wants the points of white on the wing coverts. The food of this bird is derived from that great magazine of so many of the feathered race, *insects and their larvæ*, particularly such as inhabit watery places, roots of bushes and piles of old timber.

It were much to be wished that the summer residence, nest and eggs of this bird were precisely ascertained, which would enable us to determine whether it be, what I strongly suspect it is, the same species as the common domestic Wren of Britain.

RED-HEADED WOODPECKER.

PICUS ERYTHROCEPHALUS.

[Plate IX.—Fig. 1.]

Picus erythrocephalus, LINN. *Syst.* I, 174, 7.—GMEL. *Syst.* I, 429.—*Pic. noir à domino rouge*, BUFFON VII, 55. *Pl. enl.* 117.—CATESBY I, 20.—*Arct. Zool.* II, No. 160.—LATH. *Syn.* II, 561.—PEALE'S *Museum*, No. 1922.

THERE is perhaps no bird in North America more universally known than this. His tri-colored plumage, red, white, and black glossed with steel blue, is so striking, and characteristic; and his predatory habits in the orchards and corn fields, added to his numbers and fondness for hovering along the fences, so very notorious, that almost every child is acquainted with the Red-headed Woodpecker. In the immediate neighbourhood of our large cities, where the old timber is chiefly cut down, he is not so frequently found; and yet at this present time, June, 1808, I know of several of their nests within the boundaries of the city of Philadelphia. Two of these are in Button-wood trees (*Platanus occidentalis*), and another in the decayed limb of an elm. The old ones I observe make their excursions regularly to the woods beyond the Schuylkill, about a mile distant; preserving great silence and circumspection in visiting their nests; precautions not much attended to by them in the depth of the woods, because there the prying eye of man is less to be dreaded. Towards the mountains particularly in the vicinity of creeks and rivers, these birds are extremely abundant, especially in the latter end of summer. Wherever you travel in the interior at that season, you hear them screaming from the adjoining woods, rattling on the dead limbs of trees, or on the fences, where they are perpetually seen flitting from stake to stake



Drawn from Nature by G. Wilson.

Engraved by G. Murray.

1. Red-headed Woodpecker. 2. Yellow-bellied W. 3. Hairy W. 4. Downy W.

on the road side before you. Wherever there is a tree, or trees, of the wild cherry, covered with ripe fruit, there you see them busy among the branches; and in passing orchards you may easily know where to find the earliest, sweetest apples, by observing those trees, on or near which the Red-headed Woodpecker is skulking; for he is so excellent a connoisseur in fruit, that wherever an apple or pear is found broached by him, it is sure to be among the ripest and best flavored. When alarmed, he seizes a capital one by striking his open bill deep into it, and bears it off to the woods. When the Indian corn is in its rich, succulent, milky state, he attacks it with great eagerness, opening a passage thro the numerous folds of the husk, and feeding on it with voracity. The girdled, or deadened timber, so common among corn fields in the back settlements, are his favorite retreats, whence he sallies out to make his depredations. He is fond of the ripe berries of the sour gum; and pays pretty regular visits to the cherry-trees, when loaded with fruit. Towards Fall he often approaches the barn or farm house, and raps on the shingles and weather boards. He is of a gay and frolicsome disposition; and half a dozen of the fraternity are frequently seen diving and vociferating around the high dead limbs of some large tree, pursuing and playing with each other, and amusing the passenger with their gambols. Their note or cry is shrill and lively, and so much resembles that of a species of tree-frog which frequents the same tree, that it is sometimes difficult to distinguish the one from the other.

Such are the *vicious* traits, if I may so speak, in the character of the Red-headed Woodpecker; and I doubt not but from what has been said on this subject, that some readers would consider it meritorious to exterminate the whole tribe as a nuisance; and in fact the legislatures of some of our provinces, in former times, offered premiums to the amount of twopence per head for their destruction.* But let us not condemn the species unheard. They

* Kalm.

exist; they must therefore be necessary. If their merits and usefulness be found, on examination, to preponderate against their vices, let us avail ourselves of the former, while we guard as well as we can against the latter.

Tho this bird occasionally regales himself on fruit, yet his natural and most usual food are insects, particularly those numerous and destructive species that penetrate the bark and body of the tree to deposit their eggs and larvæ, the latter of which are well known to make immense havoc. That insects are his natural food is evident from the construction of his wedge-formed bill, the length, elasticity and figure of his tongue, and the strength and position of his claws; as well as from his usual habits. In fact, insects form at least two thirds of his subsistence; and his stomach is scarcely ever found without them. He searches for them with a dexterity and intelligence, I may safely say, more than human; he perceives by the exterior appearance of the bark where they lurk below; when he is dubious he rattles vehemently on the outside with his bill, and his acute ear distinguishes the terrified vermin shrinking within to their inmost retreats, where his pointed and barbed tongue soon reaches them. The masses of bugs, caterpillars and other larvæ, which I have taken from the stomachs of these birds, have often surprised me. These larvæ, it should be remembered, feed not only on the buds, leaves and blossoms, but on the very vegetable life of the tree, the alburnum, or newly forming bark and wood; the consequence is that whole branches and whole trees decay under the silent ravages of these destructive vermin; witness the late destruction of many hundred acres of pine trees in the north eastern parts of South Carolina;* and the thousands of peach trees that yearly decay from the same cause. Will any one say, that taking half a dozen, or half a hundred, apples from a

* In one place, on a tract of two thousand acres of pine land, on the Sampit river, near Georgetown, at least ninety trees in every hundred were destroyed by this pernicious insect, a small, black, winged bug, resembling the weavel, but somewhat longer.

tree, is equally ruinous with cutting it down? or, that the services of a useful animal should not be rewarded with a small portion of that which it has contributed to preserve? We are told in the benevolent language of the Scriptures, not to muzzle the mouth of the ox that treadeth out the corn; and why should not the same generous liberality be extended to this useful family of birds which forms so powerful a phalanx against the inroads of many millions of destructive vermin.

The Red-headed Woodpecker is, properly speaking, a bird of passage; tho even in the eastern states individuals are found during moderate winters, as well as in the states of New York and Pennsylvania; in Carolina they are somewhat more numerous during that season; but not one tenth of what are found in summer. They make their appearance in Pennsylvania about the first of May; and leave us about the middle of October. They inhabit from Canada to the gulf of Mexico, and are also found on the western coast of North America. About the middle of May they begin to construct their nests, which like the rest of the genus, they form in the body or large limbs of trees, taking in no materials, but smoothing it within to the proper shape and size. The female lays six eggs, of a pure white; and the young make their first appearance about the twentieth of June. During the first season the head and neck of the young birds are blackish grey, which has occasioned some European writers to mistake them for females; the white on the wing is also spotted with black; but in the succeeding spring they receive their perfect plumage, and the male and female then differ only in the latter being rather smaller, and its colors not quite so vivid; both have the head and neck deep scarlet; the bill light blue, black towards the extremity, and strong; back, primaries, wing coverts and tail black, glossed with steel blue; rump, lower part of the back, secondaries, and whole under parts from the breast downwards white; legs and feet bluish green; claws light blue; round the eye a dusky narrow skin, bare of feathers; iris

dark hazel; total length nine inches and a half, extent seventeen inches. The figure on the plate was drawn and colored from a very elegant living specimen.

Notwithstanding the care which this bird, in common with the rest of its genus, takes to place its young beyond the reach of enemies, within the hollows of trees; yet there is one deadly foe, against whose depredations neither the height of the tree, nor the depth of the cavity, is the least security. This is the Black snake (*Coluber constrictor*), who frequently glides up the trunk of the tree, and like a skulking savage enters the Woodpecker's peaceful apartment, devours the eggs or helpless young, in spite of the cries and flutterings of the parents; and, if the place be large enough, coils himself up in the spot they occupied, where he will sometimes remain for several days. The eager school-boy after hazarding his neck to reach the Woodpecker's hole, at the triumphant moment when he thinks the nestlings his own, and strips his arm, launching it down into the cavity, and grasping what he conceives to be the callow young, starts with horror at the sight of a hideous snake, and almost drops from his giddy pinnacle, retreating down the tree with terror and precipitation. Several adventures of this kind have come to my knowledge; and one of them that was attended with serious consequences; where both snake and boy fell to the ground; and a broken thigh, and long confinement, cured the adventurer completely of his ambition for robbing Woodpecker's nests.

YELLOW-BELLIED WOODPECKER.

PICUS VARIUS.

[Plate IX.—Fig. 2.]

Picus varius, LINN. *Syst.* I, 176, 20.—GMEL. *Syst.* I, 435.—*Le pic varié de la Caroline*, BUFF. VII, 77. *Pl. enl.* 785.—*Yellow-bellied Woodpecker*, CATESB. I, 21.—*Arct. Zool.* II, No. 166.—LATH. *Syn.* II, 574, 20. *Id. Sup.* p. 109.—PEALE'S *Museum*, No. 2004.

THIS beautiful species is one of our resident birds. It visits our orchards in the month of October in great numbers, is occasionally seen during the whole winter and spring; but seems to seek the depths of the forest, to rear its young in; for during summer it is rarely seen among our settlements; and even in the intermediate woods I have seldom met with it in that season. According to Brisson it inhabits the continent from Cayenne to Virginia; and I may add, as far as to Hudson's bay, where, according to Hutchins, they are called *Meksewe Paupastaow*;* they are also common in the states of Kentucky and Ohio, and have been seen in the neighbourhood of St. Louis. They are reckoned by Georgi among the birds that frequent the lake Baikal, in Asia,† but their existence there has not been satisfactorily ascertained.

The habits of this species are similar to those of the Hairy and Downy Woodpeckers, with which it generally associates; and which are both represented on the same plate. The only nest of this bird which I have met with was in the body of an old pear tree, about ten or eleven feet from the ground. The hole was almost exactly circular, small for the size of the bird, so that it crept in and out with difficulty; but suddenly widened, descending by a

* Latham.

† Ibid.

small angle and then rounding downwards about fifteen inches. On the smooth solid wood lay four white eggs. This was about the twenty-fifth of May. Having no opportunity of visiting it afterwards I cannot say whether it added any more eggs to the number; I rather think it did not, as it appeared at that time to be sitting.

The Yellow-bellied Woodpecker is eight inches and a half long, and in extent fifteen inches; whole crown a rich and deep scarlet, bordered with black on each side, and behind forming a slight crest, which it frequently erects;* from the nostrils, which are thickly covered with recumbent hairs, a narrow strip of white runs downward, curving round the breast, mixing with the yellowish white on the lower part of the breast; throat the same deep scarlet as the crown, bordered with black, proceeding from the lower mandible on each side, and spreading into a broad rounding patch on the breast; this black, in birds of the first and second year, is dusky grey, the feathers being only crossed with circular touches of black; a line of white, and below it another of black, proceed, the first from the upper part of the eye, the other from the posterior half of the eye, and both lose themselves on the neck and back; back dusky yellow, sprinkled and elegantly waved with black; wings black, with a large oblong spot of white; the primaries tipt and spotted with white; the three secondaries next the body are also variegated with white; rump white, bordered with black; belly yellow; sides under the wings more dusky yellow, marked with long arrow-heads of black; legs and feet greenish blue; tail black, consisting of ten feathers, the two outward feathers on each side tipt with white, the next totally black, the fourth edged on its inner vane half way down with white, the middle one white on its interior vane, and spotted with black; tongue flat, horny for half an inch at the tip, pointed, and armed along its sides

* This circumstance seems to have been overlooked by naturalists.

with reflected barbs; the other extremities of the tongue pass up behind the scull in a groove, and end near the right nostril; in birds of the first and second year they reach only to the crown; bill an inch long, channelled, wedge-formed at the tip, and of a dusky horn color. The female is marked nearly as the male, but wants the scarlet on the throat, which is whitish; she is also darker under the wings and on the sides of the breast. The young of the first season, of both sexes, in October, have the crown sprinkled with black and deep scarlet; the scarlet on the throat may be also observed in the young males. The principal food of these birds is insects; and they seem particularly fond of frequenting orchards, boring the trunks of the apple trees in their eager search after them. On opening them the liver appears very large, and of a dirty gamboge color; the stomach strongly muscular, and generally filled with fragments of beetles and gravel. In the morning they are extremely active in the orchards, and rather shy than the rest of their associates. Their cry is also different, but tho it is easily distinguishable in the woods, cannot be described by words.

HAIRY WOODPECKER.

PICUS VILLOSUS.

[Plate IX.—Fig. 3.]

Picus villosus, LINN. *Syst.* I, 175, 16.—*Pic chevelu de Virginie*, BUFFON VII, 74.—*Pic varié mâle de Virginie*, *Pl. enl.* 754.—*Hairy Woodpecker*, CATESB. I, 19, fig. 2.—*Arct. Zool.* II, No. 164.—LATH. *Syn.* II, 572, 18. *Id. Sup.* 108.—PEALE'S *Museum*, No. 1988.

THIS is another of our resident birds, and like the former a haunter of orchards, and borer of apple trees, an eager hunter of insects, their eggs and larvæ in old stumps and old rails, in rotten branches and crevices of the bark; having all the characters of the Woodpecker strongly marked. In the month of May he retires with his mate to the woods, and either seeks out a branch already hollow, or cuts out an opening for himself. In the former case I have known his nest more than five feet distant from the mouth of the hole; and in the latter he digs first horizontally, if in the body of the tree, six or eight inches, and then downwards, obtusely, for twice that distance; carrying up the chips with his bill, and scraping them out with his feet. They also not unfrequently choose the orchard for breeding in; and even an old stake of the fence which they excavate for this purpose. The female lays five white eggs, and hatches in June. This species is more numerous than the last in Pennsylvania, and more domestic; frequently approaching the farm-house and skirts of the town. In Philadelphia I have many times observed them examining old ragged trunks of the willow and poplar, while people were passing immediately below. Their cry is strong, shrill and tremulous; they have also a single note or *chuck*, which they often repeat, in an eager manner, as they hop about and dig into the crevices of the tree. They inhabit the continent from Hudson's bay to Carolina and Georgia.

The Hairy Woodpecker is nine inches long, and fifteen in extent; crown black; line over and under the eye white; the eye is placed in a black line that widens as it descends to the back; hind head scarlet, sometimes intermixed with black; nostrils hid under remarkably thick, bushy, recumbent hairs or bristles; under the bill are certain long hairs thrown forward and upwards as represented in the figure; bill a bluish horn color, grooved, wedged at the end, straight, and about an inch and a quarter long; touches of black, proceeding from the lower mandible, end in a broad black stripe that joins the black on the shoulder; back black, divided by a broad lateral strip of white, the feathers composing which are loose and unwebbed, resembling hairs, whence its name; rump and shoulders of the wing black; wings black, tipped and spotted with white, three rows of spots being visible on the secondaries, and five on the primaries; greater wing coverts also spotted with white; tail as in the others, cuneiform, consisting of ten strong-shafted and pointed feathers, the four middle ones black, the next partially white, the two exterior ones white, tinged at the tip with a brownish burnt color; tail coverts black; whole lower side pure white; legs, feet and claws light blue, the latter remarkably large and strong; inside of the mouth flesh colored; tongue pointed, beset with barbs, and capable of being protruded more than an inch and a half; the os hyoides, in this species, pass on each side of the neck, ascend the scull, pass down toward the nostril, and are wound round the bone of the right eye, which projects considerably more than the left for its accommodation. The great mass of hairs that cover the nostril appears to be designed as a protection to the front of the head, when the bird is engaged in digging holes into the wood. The membrane which encloses the brain in this, as in all the other species of Woodpeckers, is also of extraordinary strength, no doubt to prevent any bad effects from violent concussion while the bird is employed in digging for food. The female wants the red on the hind head; and the white below is tinged with brownish. The manner of flight of

these birds has been already described under a former species, as consisting of alternate risings and sinkings. The Hairy Woodpeckers generally utter a loud tremulous scream as they set off and when they alight. They are hard to kill, and like the Red-headed Woodpecker hang by the claws, even of a single foot, as long as a spark of life remains, before they drop.

This species is common at Hudson's bay; and has lately been found in England. Dr. Latham examined a pair which were shot near Halifax, in Yorkshire; and on comparing the male with one brought from North America, could perceive no difference, but in a slight interruption of the red that marked the hind head of the former; a circumstance which I have frequently observed in our own. The two females corresponded exactly.

DOWNY WOODPECKER.

PICUS PUBESCENS.

[Plate IX.—Fig. 4.]

Picus pubescens, LINN. *Syst.* I, 175, 15.—GMEL. *Syst.* I, 435.—*Petit Pic varié de Virginie*, BUFFON VII, 76.—*Smallest Woodpecker*, CATESB. I, 21.—*Arct. Zool.* II, No. 163.—*Little Woodpecker*, LATH. *Syn.* II, 573, 19. *Id. Sup.* 106.—PEALE'S *Museum*, No. 1986.

THIS is the smallest of our Woodpeckers, and so exactly resembles the former in its tints and markings, and in almost everything except its diminutive size, that I wonder how it passed thro the count de Buffon's hands without being branded as "a spurious race, degenerated by the influence of food, climate, or some unknown cause." But tho it has escaped this infamy, charges of a much more heinous nature have been brought against it, not only by the writer above mentioned, but by the whole venerable body of zoologists in Europe, who have treated of its history, *viz.* that it is almost constantly boring and digging into apple trees; and that it is the most destructive of its whole genus to the orchards. The first part of this charge I shall not pretend to deny; how far the other is founded in truth will appear in the sequel. Like the two former species it remains with us the whole year. About the middle of May the male and female look out for a suitable place for the reception of their eggs and young. An apple, pear or cherry tree, often in the near neighbourhood of the farm-house, is generally pitched upon for this purpose. The tree is minutely reconnoitered for several days previous to the operation, and the work is first begun by the male, who cuts out a hole in the solid wood as circular as if described with a pair of compasses. He is occasionally relieved by the female, both parties working with the most

indefatigable diligence. The direction of the hole, if made in the body of the tree, is generally downwards, by an angle of thirty or forty degrees, for the distance of six or eight inches, and then straight down for ten or twelve more; within roomy, capacious, and as smooth as if polished by the cabinet maker; but the entrance is judiciously left just so large as to admit the body of the owner. During this labour they regularly carry out the chips, often strewing them at a distance to prevent suspicion. This operation sometimes occupies the chief part of a week. Before she begins to lay, the female often visits the place, passes out and in, examines every part both of the exterior and interior, with great attention, as every prudent tenant of a new house ought to do, and at length takes complete possession. The eggs are generally six, pure white, and laid on the smooth bottom of the cavity. The male occasionally supplies the female with food while she is sitting; and about the last week in June the young are perceived making their way up the tree, climbing with considerable dexterity. All this goes on with great regularity where no interruption is met with; but the House Wren, who also builds in the hollow of a tree, but who is neither furnished with the necessary tools nor strength for excavating such an apartment for himself, allows the Woodpeckers to go on, till he thinks it will answer his purpose, then attacks them with violence, and generally succeeds in driving them off. I saw some weeks ago a striking example of this, where the Woodpeckers we are now describing, after commencing in a cherry tree, within a few yards of the house, and having made considerable progress, were turned out by the Wren: the former began again on a pear tree in the garden, fifteen or twenty yards off, whence, after digging out a most complete apartment, and one egg being laid, they were once more assaulted by the same impertinent intruder, and finally forced to abandon the place.

The principal characteristics of this little bird are diligence, familiarity, perseverance, and a strength and energy in the head

and muscles of the neck, which are truly astonishing. Mounted on the infected branch of an old apple tree, where insects have lodged their corroding and destructive brood in crevices between the bark and wood, he labours sometimes for half an hour incessantly at the same spot, before he has succeeded in dislodging and destroying them. At these times you may walk up pretty close to the tree, and even stand immediately below it, within five or six feet of the bird, without in the least embarrassing him; the strokes of his bill are distinctly heard several hundred yards off; and I have known him to be at work for two hours together on the same tree. Buffon calls this "incessant toil and slavery," their attitude "a painful posture," and their life "a dull and insipid existence;" expressions improper, because untrue; and absurd, because contradictory. The posture is that for which the whole organization of his frame is particularly adapted; and tho to a Wren or a Humming-bird the labour would be both toil and slavery, yet to him it is, I am convinced, as pleasant and as amusing as the sports of the chase to the hunter, or the sucking of flowers to the Humming-bird. The eagerness with which he traverses the upper and lower sides of the branches; the cheerfulness of his cry, and the liveliness of his motions while digging into the tree and dislodging the vermin, justify this belief. He has a single note, or *chink*, which, like the former species, he frequently repeats. And when he flies off, or alights on another tree, he utters a rather shriller cry, composed of nearly the same kind of note, quickly reiterated. In Fall and winter he associates with the Titmouse, Creeper, &c. both in their wood and orchard excursions; and usually leads the van. Of all our Woodpeckers none rid the apple trees of so many vermin as this, digging off the moss which the negligence of the proprietor had suffered to accumulate, and probing every crevice. In fact the orchard is his favorite resort in all seasons; and his industry is unequalled, and almost incessant, which is more than can be said of any other species we have. In Fall he is particularly fond of boring the apple

trees for insects, digging a circular hole thro the bark just sufficient to admit his bill, after that a second, third, &c. in pretty regular horizontal circles round the body of the tree; these parallel circles of holes are often not more than an inch or an inch and an half apart, and sometimes so close together, that I have covered eight or ten of them at once with a dollar. From nearly the surface of the ground up to the first fork, and sometimes far beyond it, the whole bark of many apple trees are perforated in this manner, so as to appear as if made by successive discharges of buck-shot; and our little Woodpecker, the subject of the present account, is the principal perpetrator of this supposed mischief. I say *supposed*, for so far from these perforations of the bark being ruinous, they are not only harmless, but I have good reason to believe, really beneficial to the health and fertility of the tree. I leave it to the philosophical botanist to account for this; but the fact I am confident of. In more than fifty orchards which I have myself carefully examined, those trees which were marked by the Woodpecker (for some trees they never touch, perhaps because not penetrated by insects) were uniformly the most thriving, and seemingly the most productive; many of these were upwards of sixty years old, their trunks completely covered with holes, while the branches were broad, luxuriant, and loaded with fruit. Of *decayed* trees more than three-fourths were untouched by the Woodpecker. Several intelligent farmers, with whom I have conversed, candidly acknowledge the truth of these observations, and with justice look upon these birds as beneficial; but the most common opinion is that they bore the trees to suck the sap, and so destroy its vegetation; tho pine and other resinous trees, on the juices of which it is not pretended they feed, are often found equally perforated. Were the *sap* of the tree their object, the saccharine juice of the birch, the sugar maple, and several others, would be much more inviting, because more sweet and nourishing than that of either the pear or apple tree; but I have not observed one mark on the former for

ten thousand that may be seen on the latter; besides the early part of spring is the season when the sap flows most abundantly; whereas it is only during the months of September, October and November that Woodpeckers are seen so indefatigably engaged in orchards, probing every crack and crevice, boring thro the bark, and what is worth remarking, chiefly on the south and south-west sides of the tree, for the eggs and larvæ deposited there by the countless swarms of summer insects. These if suffered to remain would prey upon the very vitals, if I may so express it, of the tree, and in the succeeding summer give birth to myriads more of their race, equally destructive.

Here then is a whole species, I may say genus, of birds, which Providence seems to have formed for the protection of our fruit and forest trees from the ravages of vermin; which every day destroy millions of those noxious insects that would otherwise blast the hopes of the husbandman; and which even promote the fertility of the tree; and in return, are proscribed by those who ought to have been their protectors; and incitements and rewards held out for their destruction! Let us examine better into the operations of nature, and many of our mistaken opinions, and groundless prejudices will be abandoned for more just, enlarged and humane modes of thinking.

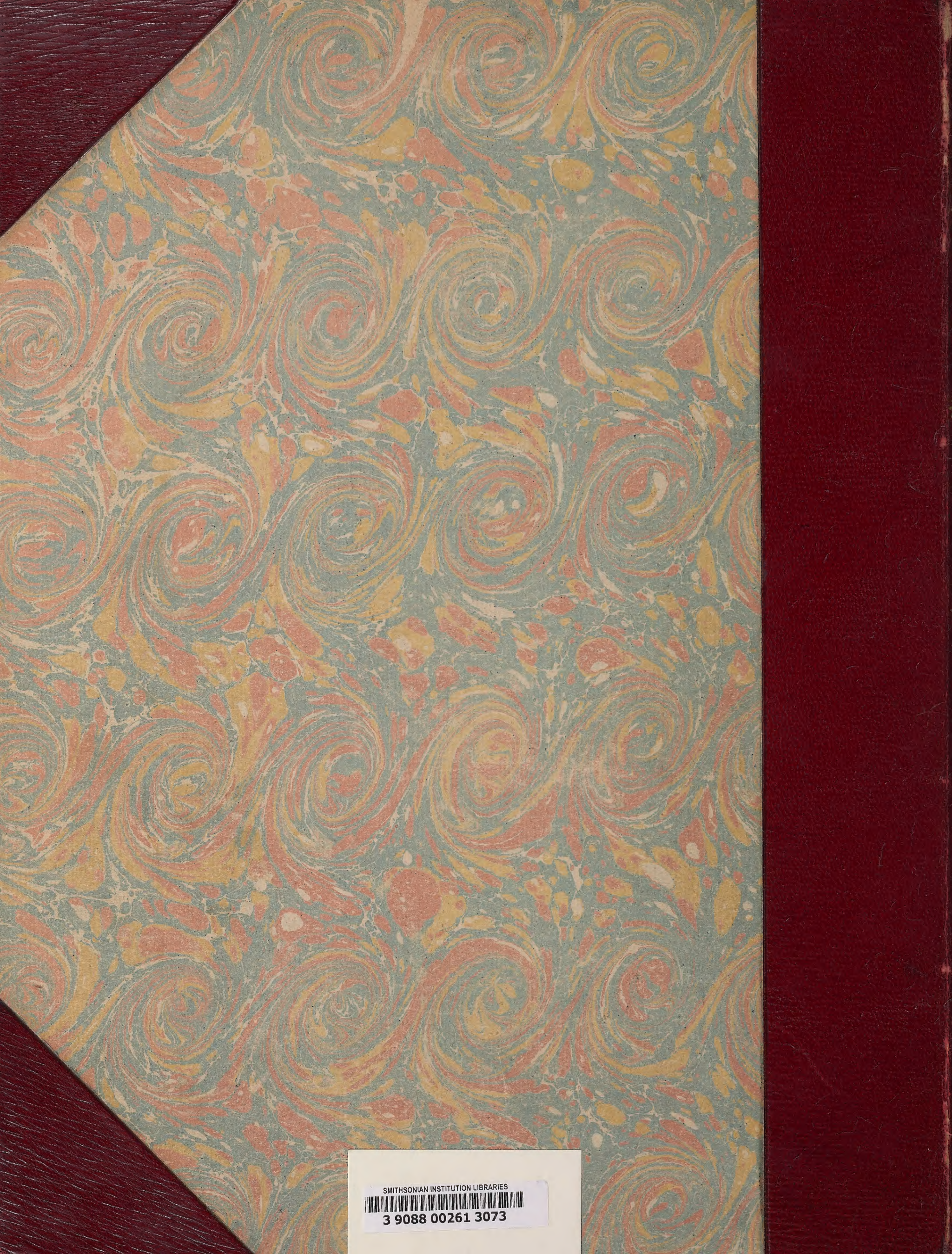
The length of the Downy Woodpecker is six inches and three quarters, and its extent twelve inches; crown black; hind head deep scarlet; stripe over the eye white; nostrils thickly covered with recumbent hairs or small feathers of a cream color; these, as in the preceding species, are thick and bushy, as if designed to preserve the forehead from injury during the violent action of digging; the back is black, and divided by a lateral strip of white, loose, downy, unwebbed feathers; wings black, spotted with white; tail-coverts, rump and four middle feathers of the tail, black; the other three on each side white, crossed with touches of black; whole under parts, as well as the sides of the neck, white; the


latter marked with a streak of black, proceeding from the lower mandible, exactly as in the Hairy Woodpecker; legs and feet bluish green; claws light blue, tipped with black; tongue formed like that of the preceding species, horny towards the tip, where for one eighth of an inch it is barbed; bill of a bluish horn color, grooved, and wedge-formed, like most of the genus; eye dark hazel. The female wants the red on the hind head, having that part white; and the breast and belly are of a dirty white.

This and the two former species are generally denominated *Sap-suckers*; they have also several other provincial appellations, equally absurd, which it may, perhaps, be more proper to suppress than to sanction by repeating.







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